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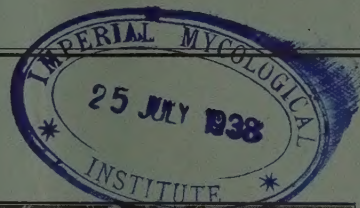
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Vol. XXXIX. No. 6.

JUNE 6th, 1938

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CHERRY CULTIVATION

Growing Other Crops Between Trees

Manure - Varieties - Diseases

THE ORIGIN and introduction into England of the Cherry tree was described by Mr. W. H. Bishop to an interested audience at Carey's Gulley, South Australia, recently. He followed his introductory by giving some sound advice upon the most suitable soils, method of planting, of manuring and some of the diseases which have to be guarded against, with a suggestion as to suitable varieties to plant.

The most suitable soil was one with 6 to 9 inches of loam with a friable clay subsoil over a slatey foundation, which should be well drained. A hill slope having an eastern aspect was best, giving a maximum of warmth, sunlight, and protection from cold. Small fruit was sometimes caused by cold Spring weather and absence of sunshine.

Later varieties generally responded to the warm weather and filled out better. For planting, soil should be broken to a depth of approximately 18 inches. Steep slopes were not a disadvantage, as they ensured good natural drainage. Such country would have to be hand-worked, being deeply hoed in Autumn and lightly hoed in Spring.

The minimum distance for planting to permit a reasonable development was 25 ft. Ploughing among Cherries could be done, provided it was carried out from the time of planting. Old trees, previously hand-worked, might be damaged by plough-

ing because of the breaking of surface roots.

Growing Between Trees.

Rhubarb or other crops could be grown between Cherries during the first few years, provided they were liberally manured. Bonedust was very suitable for use at planting time. Trees should be pruned during the first 6 or 7 years with the object of building up an open frame of the inverted umbrella type.

Leaders should be cut to an even length in order to give balance to the tree, though it was sometimes necessary to cut a strong leader back a little more so that the growth would be even. Later pruning consisted of thinning out when necessary, cutting out cross limbs and any that might be broken during picking. Summer pruning was advisable for trees which had ceased growing, cutting back into 2 or 3 year old wood.

Manuring.

When trees had reached the bearing stage they should be manured with 6 lbs. of super. per tree in Autumn and 6 lbs. of nitrate of soda per tree in Spring. Stable manure was not favored, as it appeared to encourage fungus diseases. Blood manure and sulphate of ammonia increased crops but produced rather soft fruit, while sulphate of potash made no apparent difference to crops, although it was believed to harden the fruit and thus improve its carrying properties. Nitrate of soda controlled disease

more successfully than did sulphate of ammonia; it appeared to retard the development of Black Aphid.

Diseases.

Black Spot was the worst fungus disease, being particularly bad in colder districts. Treatment consisted of spraying with Bordeaux mixture just before budburst, followed with lime-sulphur spray. Gumming was generally due to lack of drainage and could be cured by cleaning off. Insect diseases included Pear or Cherry Slug, which could be killed by half-strength arsenate of lead spray applied when the fruit commenced to color.

Black Aphid could be removed by dipping ends of young limbs in a strong kerosene emulsion bath. Nicotine sprays were not recommended; they killed the natural parasites which would otherwise help to control the aphid. Where young trees were affected by Silver Leaf the affected limbs should be cut off and the cuts painted. Old trees should be cut off at the roots.

Varieties.

The two main varieties of Cherry stock in use in Australia were Mazzard and Kentish. The former made bigger and more deeply-rooted trees, but Kentish, while it had a dwarfing tendency, would grow on a wider range of soils and would do well wherever Plums could be grown successfully. Grafting gave a better percentage of successes than budding. Scions should be cut early, heeled in until required, and should be kept dormant. Grafting was done when the buds were bursting. Earlier grafting was not likely to be a success. As there was a danger of Silver Leaf in grafting large trees, big cuts should be painted.

Picking

Cherries should not be picked too early. Black Cherries increased in size nearly 100 per cent. from the pink to the black stage. Picking during the heat of the day should be avoided if possible, especially if the fruit was to be exported. It was advisable to allow the cherries to cool overnight in unpapered cases. There was a good local and interstate demand for light Cherries for crystallising and bottling. It was important that fruit sold for that purpose should be sound and of good quality. A good report had been received on Cherries sent to Victorian factories last season. The factories would purchase very large quantities provided the quality continued satisfactory.

Most varieties of Cherries needed cross-pollination, and some research on the subject was desirable. Much work had been done in America, but it was of little use in Australia, except to show the value of cross-pollination, as the varieties used in the tests were not known here. It was necessary to grow several varieties together to ensure cross-pollination. Knight's Black would fertilise Tartarian, and Napoleon were suitable to grow among Up-to-date and Williams' Favorite.

Brown: "My wife thinks of nothing but motoring and golf. I'm getting tired of it."

Jones: "Well, at least she's in the fashion."

Brown: "Yes, but she's got the wrong idea. In golf she hits nothing and when motoring she hits everything."

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News of the Month

PROPOSAL FOR EXPORT CONTROL BOARD. IMPORTANCE OF THE AUSTRALIAN MARKET

been made in regard to the better spread of deliveries in order to avoid gluts.

However, much depends on the discussions now taking place in London and the form of organisation deemed to be best for the Apple and Pear export industry, particularly relative to powers to regulate export quotas.

The closer co-operation between the delegates to the Agricultural Council and the leaders of the industries concerned is much to be desired.

Importance of the Australian Market.
A vital aspect, however, is that the regulation of Australian markets for Apples. The home (Australian) market is the best market. The Australian Apple and Pear Council has dropped the word ("export") from its title, and has set up an Australian Markets Committee.

Special interest attaches to reports from Canberra concerning the decision of the Agricultural Council, especially in view of the fact that the Apple and Pear Section is the only major portion of the industry not operating under an Export Control Board.

It is felt that by means of a small levy, sufficient funds could be collected to carry on an effective educational publicity campaign by which the consumption of fruit could be substantially increased.

The securing of this objective would have the twofold effect of stabilising the industry and improving the health of the community.

PERSONAL

Following the resignation of Mr. R. E. Downie, the following changes will be made by Gerrard Wire Tying Machines Co. Pty. Ltd.: Mr. W. L. Gregory will be transferred from Adelaide to Melbourne and will take over Mr. Downie's position as sales manager. Mr. J. G. Cotchett, Jr., of the Melbourne sales staff will take charge of the Gerrard Office in South Australia.

Mr. S. P. Taylor, the well-known Curlwaa grower of citrus, has been appointed a member of the board of directors of the Victorian Central Citrus Association. The appointment was made in accordance with the decision to increase the number of directors from five to six.

Mr. W. B. Yeates, Western Australian representative on the Commonwealth Dried Fruits Export Control Board, came to Melbourne to attend the meeting of the Board on May 19.

Mr. T. R. Toovey, late Chief Assistant to the general manager, will relieve Captain A. W. Pearse as representative for the Port of London Authority for Australia and New

Zealand on July 1. Captain Pearse has held the position for 16 years, and has received an illuminated vote of thanks from the Board for his services.

OBITUARY.

W.A. ORCHARDIST PASSES.

The death occurred at Albany, W.A., on May 12 of Mr. L. G. A. Watson, who arrived at Mt. Barker in 1899, where he established the orchard property now controlled by Messrs. W. Pickles & Sons. After residing in England for 16 years, in 1919 he returned to W.A. and acquired the "Nelsonia" orchard at Mt. Barker until he retired this year. As a director of Mt. Barker Co-operative Society for 14 years, he was well known in the fruit industry in the Western State. The late Mr. Watson is survived by his widow and his funeral was attended by many residents of Albany.

The death occurred in Adelaide, on May 25, of Mr. William Champion Hackett, who was one of Australia's most widely known horticulturists. For forty years he had conducted a business as seedsman and nurseryman. He was aged 75 years.

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Letters to the Editor

(Correspondence is welcomed from readers. We do not hold ourselves responsible for the views expressed either by correspondents or by contributors.)

COLIBAN WATER SHORTAGE.

Mr. Lang's Contentions Challenged.

The Editor, "The Fruit World,"
Dear Sir,

We refer to the letter from Mr. J. H. Lang published on Page 30 of your issue of March 5, 1938. We do not wish to question Mr. Lang's contention that the fruitgrowing industry is a valuable one to the country, and that irrigation water is needed for the successful conduct of the industry. We wish to confine our remarks to the paragraph in which he alleges that payment of a water rate entitles Harcourt growers to preference of supplies during a shortage. Whether Mr. Lang likes it or not, this proposition quite inevitably leads, in years of shortage, to other fruitgrowers situated near the main channel being completely denied access to irrigation water. The rights of many of these fruitgrowers are of as long

or longer standing than those of Harcourt growers, and it is more efficient to supply water to them in times of shortage as a huge loss of water inevitably occurs through seepage and evaporation in the Harcourt branch channels.

The claim that Harcourt is entitled to preference over other fruitgrowers is untenable. The Act itself clearly states in Section 62 that the rate is charged in respect of supply of domestic and stock water only, and is levied to meet the costs of the construction of branch channels and other works in Harcourt, interest on same, and cost of maintenance and management. When the Harcourt growers sought the construction and from time to time the extension of branch channels in their district, they were clearly told by the authorities that they would have either to construct these channels themselves, or to pay a rate for the construction if same were to be undertaken by the Water Commission.

An analogous position would arise if the main channel growers had several years ago requested the Railway Commissioners to construct a branch railway line to their properties, and the Commissioners had done so only on condition that the main channel growers should pay a rate. What a howl would arise from the Harcourt growers if, under these circumstances, the main channel growers asserted a right in time of shortage to preference to the supply of refrigerated or other trucks for transport of their products merely because they paid a rate.

The position is simply that on no prior occasion has this right to preference ever been advanced. In all previous years all fruitgrowers have had water, except in 1914, when no irrigation water was supplied.

We are informed that certain evidence was placed before the Royal Commission of Enquiry into the operation of the Water Act by Mr. Lang, and Mr. James, both of whom were interested parties, and by an employee of the State Rivers and Water Supply Commission, who on his own admission had no contact with the Coliban area until several years after

the alleged agreement to grant priority to Harcourt growers. Evidence of this nature is not of sufficient weight to lead to the adoption of a scheme which must utterly ruin the growers whose orchards are near to the main channel.

The Water Act itself recognises the principle that orchardists should have priority over growers of annual crops, which is only right and just. But it is entirely wrong that one orchardist should endeavour to steal a march over his fellow orchardists when both should be presenting a united front to demand action on the part of the authorities to render impossible a repetition of this year's shortage of irrigation water.

Yours faithfully,

JOSKE & BURBRIDGE.

Melbourne, 20/4/38.

UTILISING WASTE FRUIT.

We have received two letters upon this important subject which are briefly reviewed hereunder:—

"Still Doing My Bit" is still confident, after interviewing distillers, that waste fruit can be commercially treated and return a profit. One means which he suggests is to use such fruit for fortifying wines. The law may have to be amended to allow this, but, in the interests of the fruit producer, this should be possible. He urges the co-operation of all growers in an attempt to put waste fruit, in some form of manufacture, upon the market and so assist the industry.

A. W. Sanders adds to his earlier contributions by suggesting that if the Government would allow the shipment of a second grade of plain Apples it would result in an increased consumption of Apples in England. The fruit would need to be free of grubs and reasonably clean, and the cases should be marked in red to distinguish the second grade suggested. People in England are not greatly concerned with a weight grade, and if they could get reasonably good Apples at a popular price, he argues, there would open up a good trade in this grade and take off the present surplus from the domestic market.

APPLE AND PEAR BOUNTY.

Closing Date for Claims, June 30.

Victorian Apple and Pear growers are reminded that their claims must be in by June 30. Claimants must satisfy the Victorian Fruit Growers' Relief Committee that they have exported or sold for export from the Commonwealth Apples or Pears of the 1936-37 season grown by themselves, and that such fruit was actually exported from the Commonwealth during the year ended December 31 last.

Many claimants have already been paid.

TASMANIA.

State Fruit Board Election.

At the recent Tasmanian State Fruit Board election, Messrs. Thos. Geo. Thompson, W. H. Calvert, C. O. Smith and H. G. Harris were Southern candidates. Messrs. T. G. Thompson and W. H. Calvert were elected. The distribution of the preferences after Mr. T. G. Thompson's election caused very close voting between Messrs. Calvert and Smith.

For the Northern Division the candidates were Messrs. Taylor, Astell, and Wright. Mr. Taylor was elected.

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WINTER CONTROL OF PESTS

Measures Recommended ∴ Scale, Aphides, Moths, Mites

JUNE, JULY AND AUGUST are the months when measures should be taken to control the above pests. San Jose, Apple Mussel, Red and Vine Scales should be protected against in these months, and lime sulphur and red oil in some form are the most common controls.

Spraying for aphid control should start in June, as also should the first attack be made upon the larvae of Codling Moth.

Mr. Keighley M. Ward, M.A.G.Sc., late of the Victorian Department of Agriculture, left behind him some most valuable advice upon Winter control measures, excerpts of which we reprint from the Department's "Insect Pests Series."

Although the following season's fruit crops on deciduous trees exist only in an embryonic stage in the dormant buds during the Winter, many of the insect pests which threaten those crops with destruction in the growing season should be attacked during the months of June and July.

The more important of these pests and the measures to be employed in their control are discussed here. Some recent developments with regard to the Winter control of fruit tree pests are referred to also.

Scale Insects.

San Jose Scale.—In Victoria the fruit trees from which the San Jose Scale has been recorded include Apple, Pear, Quince, Citrus, Peach, Plum, Cherry, Grape-vine, Almond, and Olive. Common alternate hosts are Acacias and Eucalypts. Apple and Pear trees suffer the most severe economic damage, while, on other fruits, the pest is of secondary importance only.

The insect passes through the Winter on fruit trees as a partly grown form under the protection of a waxy scale. No over-Wintering eggs are produced, as is the case with many other insects.

Dormant Spray.

Satisfactory control of the pest is not very difficult to achieve. Spraying during the dormant period of the fruit trees with either lime sulphur (1 gallon in 9 gallons of water), or Red Oil (1 in 14) will check the insect satisfactorily. Where infestation is very heavy two sprayings may be necessary to give the desired result, and sometimes supplementary measures, such as spraying with white oil,

are required in the Summer. If lime-sulphur is to be used after red oil, a month should elapse between the two applications. Spraying before pruning is a very sound practice, since, by this means all of the scales on the trees will be treated without using extra spray material.

It is difficult to decide whether either of these two sprays has any great advantage over the other. With lime-sulphur a lasting coating of the material is left on the tree and this protects the tree from any young scales which may emerge from those adults that escape the treatment. Sometimes sprayed scales survive the treatment and develop to maturity, but it has been observed that such female scales are unable to reproduce as they are apparently rendered sterile by the lime-sulphur. It has been noticed in U.S.A. that the hairy nature of terminal growths on some varieties of Apple and Pear prevents lime-sulphur from properly coating them.

Thus, scales on this portion of the tree are not always destroyed, and in Spring young scales congregate on them and on the fruit. In such cases it may be preferable to use red oil, or to follow lime-sulphur by red oil. Where red oil only is employed a quicker kill can be expected. Whichever of these treatments is adopted, the success of the treatment will depend mainly on the thoroughness of the spray application.

Supplementary control measures are the destruction of all prunings and of infested Wattle and Eucalypt trees.

Apple Mussel Scale.—This is also known as the Oyster-shell Scale. As Winter approaches the adults of the insect usually die, but the waxy scales under which they lived remain attached to the bark of the tree. Underneath these scales the insects leave behind them great numbers of minute whitish eggs in which stage the species usually over-Winters. Unless the eggs are destroyed by suitable spraying, they will hatch in Spring. Effective sprays are red oil (1 in 15) and lime-sulphur (1 in 10). In England, where Apple Mussel Scale is very abundant, the most effective treatment is considered to be a Winter spraying with tar distillate wash.

Red Scale.—In recent years in the Goulburn Valley the Red Scale of Citrus has appeared on Pear trees

growing near to citrus trees, and on numerous occasions the insect has been found on the fruit. Other fruit trees on which it has been found in this State are Apple, Walnut and Grape-vine. While Red Scale infestation of Pears has not assumed serious proportions, the presence of the scales on fruit is sufficient to make the sale or export of the fruit illegal. If unchecked, the scales will lower the health of the tree.

Red Scale over-Winters on Pear trees either in the adult or partly-grown stages. There are no over-Wintering eggs as with Mussel Scale. Lime-sulphur and red oil used in Winter at the strengths recommended above will satisfactorily control the insect on Pear trees.

Vine Scale.—On deciduous plants this pest is readily controlled by a dormant period spraying with red oil applied at a strength of 1 in 20.

Aphides.

Green Peach Aphid.—This is one of the principal aphid pests of fruit trees in this State. It is of far greater economic importance on the Peach and Nectarine than on any other fruit tree.

The Green Peach Aphid passes through the Winter in the egg stage, the eggs being laid in Autumn mainly behind buds on the laterals, also in pruning wounds, small cracks, etc., on Peach and Nectarine trees. These eggs hatch in late Winter, and thus provide the source from which the trees become infested in Spring.

Since the Winter eggs on the trees are the source of Spring infestation, it is obvious that an effective egg-killing spray applied before they hatch will prevent an outbreak of the aphid in any particular orchard. It has been proved that properly prepared tar distillate washes are the most suitable sprays to use against the egg stage. Since egg-laying is completed as late as the middle of June and hatching usually commences late in July it is necessary to apply the spray within this period. Then again, tar distillate, like other Winter sprays, must be applied while the trees are completely dormant in order to prevent plant injury from occurring. Provided this simple condition is complied with, no injury is likely to occur. This spray destroys the eggs probably by "penetrating their surface layers and coagulating the protoplasm of the underlying tissues" (Wardle).

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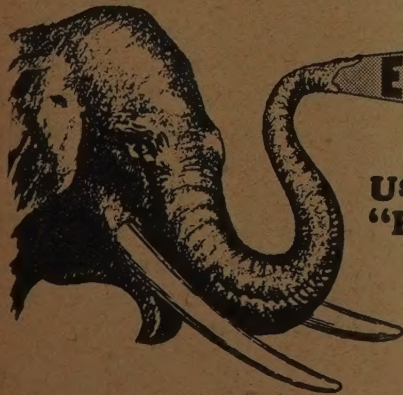
Box Hill, E.11
Victoria

Peach growers are advised to examine carefully large numbers of laterals on their Peach trees and to adopt control measures if any eggs at all are discovered on or behind the buds.

Cherry Aphid.—The Black Cherry Aphid, which is closely related to the Green Peach Aphid, is one of the principal insect pests attacking the Cherry. It has been found that this insect over-Winters in the egg stage among the leaf and fruit buds on Cherry trees. The use of tar distillate when the trees are dormant, as recommended for the Green Peach Aphid, prevents the insects from occurring on the trees in Spring.

Black Peach Aphid.—This species lives all the year round on the roots of Peach trees. During the Winter and Spring large numbers of individuals migrate upwards to establish colonies on the twigs and smaller branches. There they feed and multiply until Summer. The upward migration from below the soil may commence as early as the end of June. Therefore, to prevent infestation from becoming severe, it is advisable to adopt control measures during the Winter months.

Above ground, control should be effected by destroying the aphids before they become very numerous on the branches, or by preventing them from reaching the upper parts of the tree. Where the aphids are already established on the tree they are best controlled by spraying on a warm day with a mixture consisting of 1 pint of nicotine sulphate in 80 gallons of (Continued on page 7.)



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Extract from "BETTER FRUIT," March, 1937, by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLIN MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1936, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codlin moth control."

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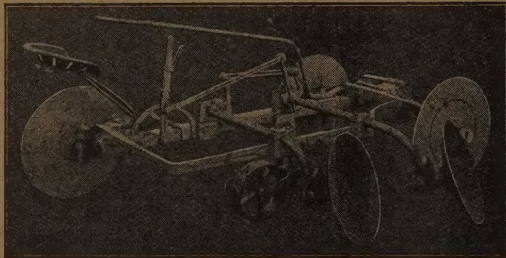
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Winter Control of Pests

(Continued from page 5.)

water to which is added $\frac{1}{2}$ lb. of soft soap previously dissolved in boiling water.

To prevent the aphids from becoming established on the laterals, it is suggested that a barrier of "tangle-foot" be placed around the trunk of the tree. This measure should be adopted by the end of June or early in July, before any aphids have migrated to the upper parts of the tree, otherwise the measure is useless.

The Black Peach Aphid is very commonly introduced into Peach orchards on nursery stock at the time of planting out. It is therefore recommended that, before planting out, young trees of Peach, Nectarine, and Plum be totally immersed for one hour in a mixture consisting of nicotine sulphate and soapy water, one fluid oz. of nicotine sulphate being used in five gallons of water.

Cherry Borer Moth.—The larvae of this native pest bore into the trunks and branches of the following fruit trees:—Apricot, Almond, Peach, Nectarine, Pear, Plum Quince, Apple, and Cherry. The Cherry Borer Moth also occurs as a pest on decorative trees, including Plane, Cork Elm, Willow, Hawthorn, Sheoak. To destroy the larvae it is necessary firstly to expose the entrance holes to the tunnels and then to inject carbon bisulphide into them with a small syringe, and finally to seal them with clay. Badly infested branches should be cut out and burned.

Oriental Peach Moth.—If maximum results are to be obtained from the use of plain bands, it is advisable to leave these on the trees during the Winter to allow certain parasites (e.g., *Dibrachys*) to play their part. The bands should be removed from the trees before the first week in September, because the emergence of the moths begins during this month. After removing the bands they should be placed in boxes, the sides of which are covered with wire gauze with a mesh of not more than one-sixteenth of an inch. Such a size of mesh will allow the parasites to escape, while imprisoning the Peach Moths themselves. Ordinary fly wire usually

measures one-twelfth of an inch gauge, which is too large for the purpose.

Mites.

Red Spider and Bryobia Mite.—These Mites are controlled by dormant-period spraying with either lime-sulphur or red oil, used at Winter strengths.

Pear Leaf Blister Mite.—Lime-sulphur, used at a strength of 1 in 12, is recommended for the control of the pest.

Vine Erinoze.—The over-Wintering habits of this mite are similar to those of the Pear Leaf Blister Mite. It is, therefore, readily controlled by spraying with lime-sulphur applied in the dormant period at a strength of 1 in 12.

Spraying Methods.

Complete cover must be obtained on all parts of the tree above ground, as every bud and crevice is a potential carrier. If only 20 eggs of the Green Peach Aphid escape contact with the spray and hatch out, the progeny could represent about 18,000,000 of individuals by the fourth generation, about early Summer, even if only 50 per cent. reached maturity. This is a challenge to careful and efficient spraying.

Again, if complete cover is obtained, there should be no necessity for spraying again for scale insects or mites for more than one season. This does not follow, however, with the Green Peach Aphid, from which infestation can come by means of winged aphide from secondary hosts.

The type of spray is important. A good driving mist from a heavy type of spray will be more advantageous than a light type, and not use any more material per tree. In Victoria it has been demonstrated that for ordinary Winter spraying, a single nozzle with a fairly large aperture, at about 250 lbs. pressure, gives a good satisfactory driving spray.

Winter spraying must be applied before the early Spring growth commences. Better results are obtained on the tree as well as a better kill of the pests.

Trapping of Fruit Fly

The Prescribed Lure.

N.S.W. fruitgrowers are reminded that in accordance with the provisions of the Plant Diseases Act, 1924, Fruit Fly lures must consist of a solution of vanilla, ammonia, and water in the proportion of one-eighth of a fluid ounce of vanilla, one-half of a fluid ounce of household ammonia, and twenty-six fluid ounces of water. These proportions correspond to a teaspoonful of vanilla essence and a tablespoonful of household ammonia in three breakfast cups of water.

A penalty up to £50 is provided for failure to comply with the provisions of the Act.

This formula, points out a recent Departmental statement, was decided upon after exhaustive tests, and has proved most effective. It has been found that samples of certain manufactured lures do not conform to the prescribed formula, and in the opinion of the Department's experts are not nearly so effective. The attention of manufacturers is also drawn to the provisions of the Act. Unless proprietary lures comply with the Department's formula, they cannot legally be used.

Spray for Codling Moth

C.S.I.R. Looking for Substitute.

According to the annual report of the C.S.I.R. recently released, the Council is seeking a spray for codling moth control which cannot be objected to on the grounds of poison effects. The report states that:

"Because of the objections raised by health authorities re arsenical residue, some other toxic substance is required to replace it in codling moth spray schedules. One of the most promising insecticides, Phenothiazine, however, becomes oxidised on exposure and leaves a black film over the fruit. Experiments are in progress with the object of preparing phenothiazine derivatives which will not oxidise on exposure. Various preparations of Australian and imported bentonitic clays combined with brown coal and nicotine are also being studied for spraying materials."

Motorist: "Why, it's preposterous. I'm an expert driver. What I know about driving would fill a book."

Policeman: "And what you don't know would fill a hospital. Give me your name and address."—"Buffalo Motorist."

Arsenical Residue on Fruit

Tolerance is Determined on a Wrong Basis

Australian Grower's Questions.

READERS will remember the article on arsenic residue on Apples and other goods that appeared in our May issue, with quotations by Dr. Cardiff, of U.S.A., before the annual meeting of the Washington State Horticultural Association.

An Australian reader now forwards the following letter and some cuttings from a further issue of the "Pacific Rural Press," in which the charge of poison effects from arsenical residue on fruit is ridiculed. The reader's letter is as follows:—The Editor, "Fruit World."

Sir,
I am sending further cuttings from the "Pacific Rural Press" on spray residue on fruit. It is indeed hard to follow why the experts connected with the Pure Food and Drugs Act persist in sticking to this mare's nest of their own creation.

This absurd regulation costs the Apple and Pear growers endless trouble and expense, and all for no reason whatever. Sulphur dioxide contents of dried Apricots is, I think, another, as having some thirty years experience as a grower, as well as some packing shed experience, I have never heard of any ill-effects from sulphur dioxide, some of the girls employed packing boxes of dried Apricots got outside a fair wad of the dried fruit daily.

Yours faithfully, W. E. MUSPRATT.
Littlemore, Queensland.

ANOTHER MR. X.

Eats Foods With More Poison than is Allowed on Fruit.

The paper facetiously tells the story of another Mr. X., who, by all the rules of the attackers on poison residues on fruit, should have died in his early youth.

When he was born he appeared to be a normal baby, and his mother, who was college trained in domestic

science, and his father, who is a chemist in one of our western universities, resolved to rear him scientifically.

But he was born before the U.S. Food and Drug Administration had set their present tolerances on spray residue, and public attention had not then been directed to such "poisons" as lead, arsenic and fluorine.

So his careful mother unwittingly fed him a prepared baby food which contained more arsenic and fluorine than the Food and Drug Administration now permits the farmer to have on his fruit. There was lead in the water he was given to drink, and practically every food he ate as he grew older contained lead, arsenic and fluorine.

Thus "poisoned," he developed into a college boy who was 6 feet 2 inches tall, weighed a little over 200 pounds, and played guard on the football team.

Recently, says the paper, Mr. X. went on a "bust" with his fiancée, and ate fish containing allowed poison, sardines containing four times as much fluorine as allowed by law, lobster containing twelve times more arsenic than allowed, bread made with baking powder containing 100 times the amount legally allowed, tea with 50 times as much fluorine as was allowed, he smoked tobacco containing nicotine, yet nobody got excited at his risk, but when he reached home and started to eat an Apple his mother, who had "studied" the dangers of spray residue on Apples and Pears, stopped him from eating the Apple, and he went to bed without his Apple—and saved his life.

The story is fictitious, of course, but can be quoted as an absurd belief held by some people in the danger to which the public are exposed by the bugbear of residue poisoning by eating fruit that has been sprayed at some time during its maturity.

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RECORD EXPORT FROM PAKENHAM.

130,000 Cases Apples.

The 1936 export season bids fair to place Pakenham in the lead for Apple export from Victoria, and it is anticipated that their total offering should reach 130,000 cases.

Reports from London indicate a good demand at remunerative prices which, if maintained, will be very satisfactory to growers. Up to date the quality of the fruit harvested has been high, and all varieties have experienced a good yield.

Trade with Ceylon

Fruit Fly Fears are Based on
Unscientific Grounds.

The Australian fruit export trade is likely to suffer if the proposals of Ceylon to prohibit the importation of fruit from countries in which the Mediterranean Fruit Fly is known to exist is carried into effect.

Advices from W.A. are to the effect that this would mean a loss of about £50,000 to that State alone. A deputation of growers recently waited upon the W.A. Minister of Agriculture, Mr. Wise, and requested that negotiations be opened up with the Government of Ceylon with a view to allowing fruit from W.A. to be exported to Ceylon under Departmental certificates of freedom from Fruit Fly.

This subject of the proposed legislation by the Ceylon Government to restrict the importation of fresh fruits into Colombo from countries in which the existence of Fruit Fly is known has been causing a good deal of concern to Australian fruit producers and shippers for some time past.

It is understood that the Department of Commerce has this matter in hand, and that negotiations are proceeding.

Australia is a vast country and most fruit-growing areas are entirely free of the Fruit Fly.

The fact that Australian fruit has been going into Ceylon, India, China and other Eastern countries for so long without the necessity for the present proposed legislation re Fruit Fly should really be sufficient answer as regards the amount of risk involved. The whole situation could be adequately safeguarded and our Eastern friends could continue to receive our fruit in the future as in the past, without any fears.

Trade embargoes, especially when based on unscientific grounds, always create difficulties; in the instance under review it is noted that Ceylon exports considerable quantities of goods to Australia, similar to those of some other Eastern countries, and retaliatory methods would be regrettable.

VICTORIAN FRUIT EXPORTS.

800,000 Cases Handled by Railways.

During the 1938 export fruit season the Victorian Railways handled more than 800,000 cases of Apples, Pears, Plums, etc. Hundreds of employees throughout the State were concerned in facilitating the loading of this fruit at country stations, and the movement of trains to the seaboard was well organised, so that a continuous supply was available to meet ships' loading requirements.

The fruit was despatched to the U.K., Continent and the Near East.

Advice on Fruit Tree Planting

BEING confident that the importance of early planting is, in a great number of instances, not fully realised, I venture to make the following remarks with regard to the matter, in the hope that the same may be of assistance to any who are in doubt with regard to the best time to plant.

In districts with an average rainfall of 25 in. or under, there are usually great benefits to be obtained by early planting of deciduous trees. To persons who have studied the habits of deciduous fruit trees, it is well known that, although the top portion of the tree appears dormant for three or four months during the Winter, the roots do not have a dormant period of more than a few weeks. I have known trees to have a very visible growth of new roots when removed from the nursery bed early in June. Immediately these tender hair roots are exposed to the air they perish, and the tree loses that amount of vitality, and has to start afresh. It can, therefore, be readily seen that if a tree is planted in a warm, moist soil, say at the end of May or early in June (providing, of course, that a good rain has taken place, sufficient to thoroughly moisten the soil down to the subsoil), it will be well established in its root system by early Spring, and extra growth and vigour will be the result.

Receiving the Trees from the Nursery.

Upon receipt of your trees from the nursery, moisten the roots, but do not leave the trees standing in water. If they are all to be planted within a few days, keep the roots covered with damp bagging, straw, or some similar substance, and keep them in a sheltered place away from winds.

Plunging or Heeling In.

If the trees cannot be planted for some little time, place them, in an upright position, in a shallow trench about 2 ft. wide and 6 to 9 in. deep, and then shake loose earth in among the roots, completely covering them with moist soil. Firm them a little, and be sure the soil is kept moist. In this manner it is possible to plunge hundreds of trees in a few feet of ground, and they will be quite all right for a long period during the Winter months, and by employing this practice the planter has his trees handy, and can make the best use of every opportunity he has for planting. This is termed plunging or heeling in, and is the usual practice of nurserymen when assembling orders, and I feel sure that if planters would take early delivery of their trees and employ this method of holding them they would find that a great deal of the worry and trouble of planting would be eliminated because of the absence of the need to rush the matter through.

Preparation for Planting.

Previous to planting, the soil should be thoroughly broken up as deeply as possible. Subsoil ploughing is to be highly recommended. The ground cannot be worked too much prior to planting, and a year's fallowing, although not essential, is very beneficial. If the soil is well and deeply tilled, as it should be, it is not necessary to take out a larger hole for planting the tree than the size of the roots demand. Mr. G. C. Roeding, one of California's most prominent nurserymen and fruitgrowers, states with regard to this matter:—"Nothing is so beneficial as subsoiling, though planters are often disposed to avoid this additional expense, but where time and conditions will permit, it will do more to promote a fine deep root system and an unusually heavy growth

than any other thing that can be done in the preparation of the soil.

Planting.

To plant the tree, break up the bottom of the hole as deeply as possible, and leave the soil a little higher in the centre. Shorten back the roots before planting, taking care to remove with a sharp knife or secateurs all bruised portions. Mix two or three good double handfuls of bonedust in with the soil as it is filled in, making sure that it is well stirred through the loose earth. There are several methods of marking off the land to be planted. If the ground is very flat, with no undulations, a chain or wire marked off with the distances the trees are to be apart can be employed satisfactorily, after determining three of the boundaries, which must be proved to be at right angles to one another. After marking the two opposite boundaries with pegs at each spot where a tree is to stand, a start can then be made from the third boundary which forms the base, and

by stretching the chain between the pegs on the two opposite boundaries, the trees can be placed at the marked spots on the chain or wire. If the ground is at all uneven, this method, of course, would be unsuitable, and the exact locality for each tree must then be marked with a peg, and then by the use of a planting board and two small pegs the trees can be placed on the exact spots where the pegs have stood. The centre notch is placed around the peg where the tree is to stand. Then place the two small pegs in the notches in the ends of the board. Remove the centre peg and the board, and prepare the hole for the tree. The board is then replaced between the two small pegs, and the tree placed with the stem in the centre notch, and the earth filled in with the tree in that position.

Firm the tree in gently by starting on the outside of the hole and working into the centre towards the stem of the tree. The tree should be planted so that the former earth line is about on a level with the surface of the ground. This earth line is easily discernible on the tree by the color of the bark.

When finishing, the earth should be heaped around the tree trunk about an inch or so higher than the ground level, and should slope from there to the ground level at the edge of the hole. This for two reasons: The filled in earth will sink a little after planting. It is very inadvisable to have the surface immediately surrounding the tree in the form of a basin, and so collect the surplus water around the tree stem, allowing the filled-in soil to become sodden.

Cultivation.

Remember the first few years are most important to the young trees, and cultivation is the keynote to successful growth. It is bad business for the grower to neglect trees after having invested his money in them, and is also a poor advertisement for the nurseryman. The planted area should be thoroughly tilled throughout the Summer months, and especially should a good mulch of loose earth be kept around the stems of the trees.

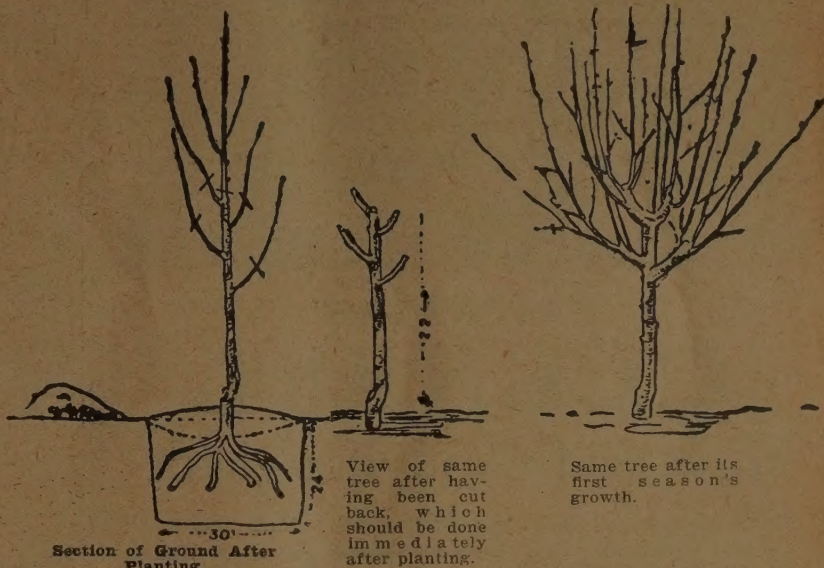
Pruning.

As soon after planting as possible the young trees should be pruned, cutting out the centres to give an

HOW TO PLANT AND CUT BACK

DESCRIPTION OF PLAN BELOW.

Showing size of Hole, Method of Trimming the Roots, Planting, Watering and Pruning all Yearling Fruit Trees.—The same applies to the planting of two-year-old trees, excepting that the pruning is not quite so close.



Section of Ground After Planting.
The dotted line above the roots represents the basin to be left after planting, and which is to be filled with water, which, when the water has soaked away, is filled with the remaining ground shown on the left: if the planting is followed by a good rain it will be unnecessary to apply water.

View of same tree after having been cut back, which should be done immediately after planting.

Same tree after its first season's growth.

—Block courtesy C. J. Goodman, Bairnsdale, Vic.

open tree, leaving four or five leaders and cutting these back to within a few inches of the stem, and cutting to an outside eye in every instance. It is bad practice to prune trees prior to planting, as there is grave danger of damaging the terminal eyes on the leaders, which results in a crooked start for the injured limb.

Cross Pollination.

It is now a well-established fact

that the cropping qualities of certain varieties of fruit trees are greatly improved by cross pollination, and consequently it has become a matter of great importance to orchardists to plant varieties that bloom at the same time in close proximity to one another.

Not only do better crops prevail

(Continued at foot of next page.)

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PEACHES Anzac, Briggs, Hale's, High's, Golden Queen, Pullar's Cling, Peregrine, Salway, Zerbe, and others too numerous to mention.

Let Goodman's supply your fruit tree requirements for 1938 planting season:—Apples, Plums, Cherries, Apricots, Nectarines, Figs, Quinces, Almonds, Walnuts, and Mixed Fruits, etc. Prolific bearers of finest Fruit for home or overseas markets.

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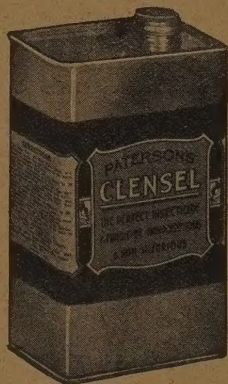
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Fruit & Nut Tree Varieties

On the subject of fruit and nut trees, Messrs. C. A. Nobelius & Sons Pty. Ltd., Gembrook Nurseries, Emerald, Vic., write as follows:—

The following are a few notes on the leading varieties.

In Almonds, Brandes' Jordan is going out of favor for other varieties such as Chellaston, Hatch's Nonpareil, sometimes called Californian Paper Shell, I.X.L., Johnston's Prolific, and Peerless, these are now the recognised varieties, and being planted in large quantities.

In Apples of more recent introduction, Desert Gold (Golden Delicious) is proving a very good variety for our local markets, and should be also recognised in the export list. Red Jonathan, known in America as Black John should be grown more largely, this Apple, if of the same quality as Jonathan, but has much better color, and obtains the color earlier in the season, which should be a great acquisition to growers looking for color in their export fruit. Looking for color in the old variety there is quite a large quantity of fruit lost through dropping, whereas this is avoided in the red variety. Other good home garden varieties are Banana, Grime's Golden, and Red Pomme de Neige. Another variety that should be mentioned for local market and export, is red Statesman.

In Apricots, Moorpark is again being planted in large quantities, following this variety in demand is Trevatt and Tilton.

In Peaches for local market, Beale can be recommended for an early variety with Peregrine, Smiths Seedling, and Webb's Seedling for mid-season. In yellow flesh freestone Peaches, J. H. Hale is coming to the front, the fruit of this variety being very firm, large and round which makes it ideal for handling.

In Pears of recent introduction, Notaire Lepin is proving good, this is after the type of Jos. des Malines, the tree being a much better grower and crops equally as heavy. In other leading varieties Packhams Triumph, Beurre Bosc, Beurre D'Anjou, Beurre

Hardy, Doyenne du Comice, Jos des Malines, Williams Bonchretien, Winter Cole and Nelis can be recommended.

The most recent introduction in Plums is King Billy, which is of the Angelina, Burdett type, but said to be an improvement on this variety. Another one now in cultivation is Thieles, Jap. type, a late variety producing very firm good colored fruit and very heavy bearer.

In the English Plums, Grand Duke, Jefferson, President, Japanese varieties October Purple, Santa Rosa, Narrabeen, and Satsuma, can still be recommended.

In Quinces, Smyrna is the variety that is strongly recommended for planting.

Apricot Crosses

N.S.W. Department's Experiments.

The following report has been received from the N.S.W. Department of Agriculture regarding success achieved by crossing certain varieties of Apricots with a view to securing a satisfactory type for canning purposes.

Since 1928 Mr. W. Poggendorf, Assistant Plant Breeder at Yanco, has been crossing Trevatt and Moorpark with other varieties in order to produce a better mid-season and late canning Apricot for the Murrumbidgee Irrigation Area.

Seedlings grown from these cross-pollinated fruits are studied each season for their tree and fruit characters. If promising, the fruit is submitted to the Leeton Co-operative Cannery for a canning report.

All the seedlings from the 1928 crosses have now fruited for at least two seasons. One crossbred seedling, viz., Trevatt x Tilton, is of good bright color and good flavor, and if the canning texture is satisfactory next season this seedling will be propagated as a new variety.

Of the 1929 seedlings, one, namely Moorpark x Houche Pêche, has already been propagated in the orchard at the Rice-Research Station, Yanco. The fruit ripens evenly between that of Moorpark and Trevatt, and has good quality both fresh and canned. Of the later crosses, a Trevatt x Alsace seedling gave fruit last season of good size, color and quality. The canning report was very favorable, and if confirmed next season, this crossbred seedling will also be propagated for larger trial. Owing to the late frosts last season at Yanco, the crossbreeding programme was a complete failure with this fruit.

SOLO HONEYMOON.

Said a housemaid to her employer: "I've been and gone and done it; I've got married."

Mistress: "Then you'll be leaving us."

"Not yet m'am; my husband has gone away for a month on his honeymoon, and I'll stay till he returns."

(Continued from page 9.)

amongst orchards which are subjected to this treatment, but the number of windfalls is reduced to a minimum, as properly fertilised fruits do not fall to anything like the extent that do partially fertile ones.

The benefits of cross pollination are especially noticeable in Apples, Pears, and European Plums.—H. N. Wicks. Balhannah, S. Aust.

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Tasmanian News & Notes

Export Problems :: Proposed Export Control Board

(By Our Special Correspondent)

THE FRUIT EXPORT SEASON is rapidly drawing to a close, and it will be a relief to all concerned when it ends.

It is hard to say what has been the outstanding feature of the season, but I think the ever-increasing friction between the industry and the Department is the most noticeable feature.

Not one section of the trade appears to be satisfied with the way the Regulations are being interpreted, the ships are mostly stowing short, owing to the "poisoned pup" bulge put in the Canadian cases by many growers for fear of having them stopped for slack packs. In many instances they are jamming 48 lbs. of Apples into a case designed to hold 40 lbs. The fruit is not packed into the case, but on to it, consequently there is a difficulty in stowing the anticipated quantity.

The result appears to be that about ten per cent. is shut out of many of the ships and remains deteriorating on the wharf till at length it gets stopped by the Inspectors for either being slack packed or overripe, consequently the shipping programme is completely disorganised and the growers are losing thousands of cases. All this is being done to "save the industry." Fancy ruining the individuals comprising the industry to save the "industry." It seems like cutting the patients throat to stop his nose from bleeding.

Those who are unfortunate enough

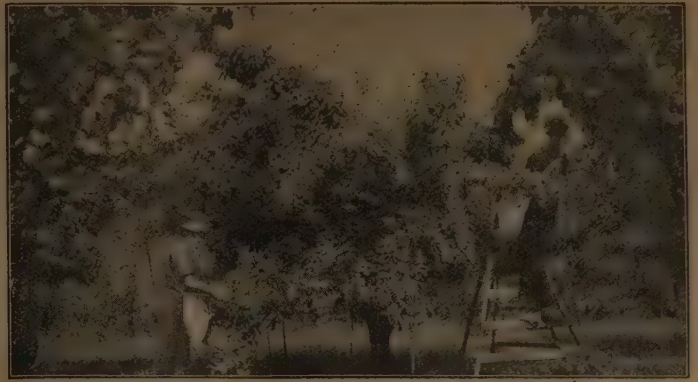
The growers are inclined to blame the shipping agents for the disorganisation. Personally, I think they are doing their best, but all arrangements are upset from the aforesaid causes, combined with the natural difficulties of the trade.

Those agents who are in the F.O.B. trade may have to meet claims for non-fulfilment of contracts, as they have difficulty in getting delivery of their fruit from the grower, because too frequently they can't get it on the right boat.

Once the programme is deranged from any cause it naturally goes from bad to worse.

We can't do without inspection and regulations, but the interpretation of the regulations should not be left to the official's judgment alone, as in some instances really good fruit is injured by being detained for some technical fault.

The fruitgrowers are a long suffering lot. Those of us who have been taking an interest in the outlook for the future of the industry were somewhat perturbed to see by the press that the Agricultural Council are recommending the Federal Government to supersede the Apple and Pear Council by a Control Board, but as no details were given, we can't express our opinions except in a general way, but it seems rather strange that a proposal of that sort should be brought forward so soon after the referendum on the marketing question,



Picking Cleopatra Apples in Channel orchard, Southern Tasmania.

leaving great quantities on the trees and the local market glutted and the guarantee a myth.

Then the huge crops of beautiful Delicious Apples which promised to give us some return; we find all Inspectors instructed to condemn thousands of cases of lovely fruit. Then, on top of that, we had another shock when we found A and B larger sizes cut out altogether. Now we look for fault they will find in our Sturmer crop. All this from a Government who are supposed to give the fruit-grower a fair deal. I can see not a few of us looking to the Bankruptcy Court for protection.

This is Apple growing, and the largest industry in the district. In the face of this, how can we make it pay?—I am, etc.,

"A GROWER."

"Nelson Times," N.Z.

We would like more information concerning the Agricultural Council's proposals. Is the Board to be an elective or a nominee Board, and how is the representation to be adjusted between the States?

TASMANIA.

Weather and Crops :: Pests and Diseases :: Export Packs :: Stone Fruits :: Berry Fruits :: Pruning :: Planting :: Guard Against Introducing Disease.

THE Minister for Agriculture (Hon. R. Cosgrove) is in receipt of the following report from the Chief Horticultural Officer relative to the condition of orchards throughout the State during the past month.

Weather and Crops.

April was, on the whole, very favorable to fruit harvesting, and the temperature conditions higher than average. Rainfall was on the whole below average in most fruit districts, recordings received by the Weather Bureau for representative centres reading as follows:—

Hobart, 128 points, compared with the average of 197 points, Franklin 144 points compared with 292, and Launceston 301 compared with 221. In Northern districts the rainfall was in general above normal, and recently severe hail was experienced, which in some areas ruined almost all later varieties which still remained on the trees.

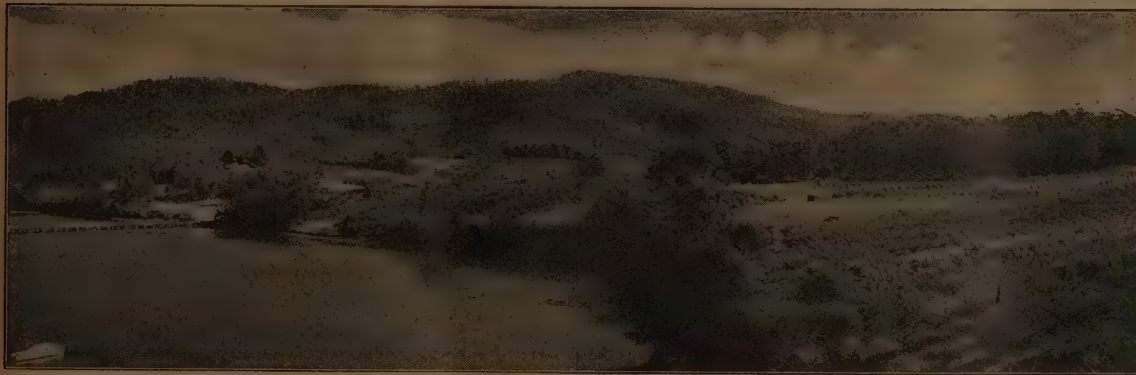
Pests and Diseases.

Reduced rainfall in most areas has checked the development of late Black Spot infection which seemed imminent following the heavy falls in March; in some of the moister areas, however, Cleos and other Spot susceptible varieties have suffered considerable loss. A combination of climatic conditions and more efficient methods of control have reduced the Light Brown Apple Moth to comparatively small proportions, and some of the most affected orchards in the Margate and Huon districts last season have had little loss in this respect to contend with. Canary Fly has appeared in many orchards not hitherto noticeably affected, but marking of the fruit has been slight, owing to the heaviness of rain showers. As mentioned last month, Red Spider is likely to require special attention during the late Winter months.

Packing and Export.

Overseas export is still in full swing, and up to the present time 2,200,000 cases have been shipped. Much loss has occurred through certain varieties of fruit becoming too large for export and physiological diseases are also prevalent. It seems probable that for this season some of the later varieties (which incidentally have matured earlier than usual), and those usually retained for interstate purposes, will find their way overseas. As the quality of these is high and includes excellent samples of Crofton and Democrat in addition to the usual late varieties shipped overseas, it is expected that the condition on arrival and reception on the market will be good.

Packing Instructors continue to report difficulty in securing uniform



View of seaside orchard property, Birches Bay, Tasmania, looking towards the west.

to grow Cleopatras (once a profitable variety) are now contemplating cutting them down or reworking them on account of the constant detentions for "mis-shapen" fruit. In the past I have seen many comedies on our wharves, but this year it is tragedy. The out-turn of the fruit is being prejudiced more by the constant re-packing than letting it go with the original minor faults.

I think it probable that all sections of the trade will make a united protest to the Commerce Department in Canberra when the season is finished, as we can't face another season like it. The shipping agents wear a worried look; the growers' nerves are red raw through the uncertainty as to whether their fruit is passed or detained. This applies to all sheds, small private sheds and large community sheds alike. The only difference seems to be that where an individual gets 50 or 100 stopped, the big shed gets 500 or 1,000.

The lorry drivers protest at the waste of their time owing to the congestion.

which was defeated by such a huge majority.

Whatever the faults of the Apple and Pear Council, it is an elective body in the main, and the personnel can be changed, but once we get a Control Board anything may be done and there would be no redress if they made a muddle of our business, which appears to happen in other places where they have Control Board judging from the following extract from the "Nelson Times," 6/4/38, headed

The Plight of the Apple Growers.

Sir,

First of all we agree to the increase in wages so long as we are paid a payable price, hence the 11/- guarantee. Then, when we see a record crop and a likely over-supply on the London market, we are told of a shortage of ship's space in the face of dry weather north and south, making short butter supplies and lots of space not taken.

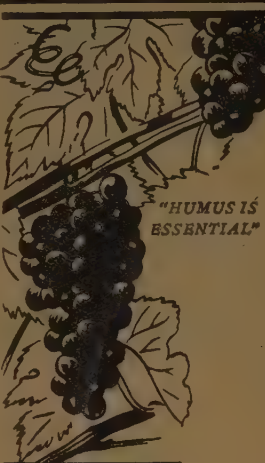
Then, on top of that, word comes to close down on our good Jonathans,

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Another plan may be used if the stump has cracked with exposure to the weather. Into the cracks one may pour some kerosene, giving time for it to soak in well. Two days may be needed. Then dry refuse should be piled on the top of the stump and set on fire. The whole of the stump will be so well soaked with kerosene that it will burn easily and soon be destroyed.




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crown packs in certain Canadian type hardwood cases, not only is some variation in size experienced, but thick and rigid hardwood tops and bottoms do not assist the grower to put up a satisfactory pack free from bruising. Arrangements for the commencement of school packing classes are well under way, and still larger numbers of pupils are expected this year.

Stone and Berry Fruits.

The prevalence of Brown Rot amongst late Peaches and Plums has caused much anxiety to growers this year, as well as the earlier infections on Apricots. Thorough hygienic methods will be of great assistance in reducing this fungal trouble next year. All mummied diseased fruits still remaining on the trees and on the ground should be removed and burnt or buried deeply as soon as possible; at pruning any spurs showing gumming must be destroyed. An Autumn sulphur spray has been tried as an additional safeguard. Early pruning of Apricots and other fruits has many advantages, and no time should be lost after the leaves have thinned sufficiently.

The sooner old canes are removed from Raspberry plantations and burnt, the less likelihood of trouble through anthracnose; all weak, green, unripened young canes should also be cut out now. Where tipping is necessary, here again adopt the practice of removing unripened wood, and with such varieties as Lloyd George, which tip fruit in Autumn, canes will be cut back to the first dormant bud.

Black Currants can also be pruned now if the leaves have fallen, and cuttings set if necessary. Where Currant Borer is apparent make sure that all tunnelled wood is removed and burnt; cut back until the grub is located and healthy white pith shows.

Autumn Strawberry planting is still proceeding, but should be stopped as soon as serious ground frosts begin to penetrate and lift the soil; it may be resumed again in August or September. Much controversy goes on as to when and if plants should have the old leaves removed. Generally speaking, this will depend largely on the locality, season, and the presence or otherwise of excessive Leaf Spot. After fruiting when the older leaves are showing signs of browning and the first good rains cause a burst of young leaf and runner formation, is perhaps the best time to clear up the bed. Where frosts are less severe this operation may be left until April, but only the oldest leaves are then taken and previously runners should have been suppressed at intervals. Experiments have shown that by letting plants runner the crop of berries ultimately produced is only one half that where they have been periodically suppressed.

In frosty localities the bed should be cleared after fruiting, and apart from suppressing runners no older leaves removed until Spring when the worst frosts have passed and signs of fresh leaf development are in evidence. To those growers planting out fresh areas with purchased runners, make sure that all soil is washed from the roots so that the chance of introducing Weevil and other pests with the young plants, is lessened.

NEVER OCCURRED TO HIM.

"Judge," explained the arrested motorist, "I tried to warn the woman, but my horn wouldn't work."

"Then why didn't you slow down instead of running over her?" inquired the judge.

A light seemed to dawn on the motorist, and he said: "That's one on me, judge. I never thought of that."

THE CITRUS INDUSTRY

Handling Citrus Fruits . .

Care Essential

Care in the handling of citrus fruits pays the grower handsomely. Rough handling contributes towards wastage losses in export, fruit and in fruit being held by local markets, because, chiefly, of green and blue moulds, which are familiar to every citrus grower, says the "Queensland Producer."

These moulds are fungal parasites disseminated by means of spores which chiefly gain entrance to the fruit through bruises and skin abrasions.

The healthy unbroken skin of the Orange is proof against almost all decays.

Abrasions may be caused during picking operations by the finger nails of careless pickers, or by allowing the clippers to cut into or pick the rind of the fruit when cutting the stem.

By the use of clippers with cup-shaped blades and rounded points, there is no excuse for the fruit being clipper-cut whilst the gloves on the hands will prevent finger nail injury.

All stems should be cut off short and smooth, otherwise they are likely to puncture the skin of other Oranges during handling.

Another source of damage is protruding nails on the inside of the picking boxes, the points pricking into perfectly good Oranges, causing punctures through which spores may enter.

The picking boxes should be well made; the internal surfaces of the boxes should be finished smooth to avoid friction during transit of the fruit from the orchard and the packing shed.

It is not only necessary for the orchardist himself to be careful, but he must also see that his employees are not negligent.

In the packing shed most growers make some provision to ensure cleanliness; nevertheless, there are some who do not appreciate the obvious necessity for hygiene. Occasionally uncovered buckets and tins are observed containing mouldy fruits in various stages of breakdown which are allowed to accumulate from day to day. Where this occurs, those responsible for the cleanliness of the shed fail, apparently, to realise the enormous number of spores produced from mouldy fruit which are dispersed in the form of "mould dust," capable of reproducing the same decay in all punctured and bruised fruit with which it comes in contact. It is essential that all waste and reject fruit which accumulates during each day's work should be effectively destroyed daily by burning. Moreover, a frequent washing of the floors of the packing shed with a 3 per cent. caustic soda solution, or other suitable fungicide, will reduce mould contamination within the shed.

Vegetable Markets were discussed. The markets are to be opened at 7 a.m. from May 2, and sales are prohibited before that hour. Growers will be permitted in the New Producers Market at all hours during the night, but horses must be removed from growers' vehicles and stabled outside the markets. Agents will be permitted in other markets at 6 a.m. to arrange their produce for sale.

Some disappointment was expressed that the opening hour had not been left as previously, and members gave the opinion that at the end of the period during which the present hours are on trial the opening hour will be made 6 a.m. instead of 7 a.m.

Orchards Tax.—The plan of campaign for future activities of the Association to urge that a poll be held in connection with the rescission of the Orchard Tax, was adopted. This involved action in Parliament.

Fruit Enquiry.—Strong exception was taken to the action of the Commissioner in asking banks to supply information concerning orchardist clients. It was decided to urge members to instruct their banks not to supply the information asked for.

Change of Name of Association.—The suggestion that the Association should change its name to include all fruitgrowers was freely debated, and deferred until the annual general meeting.

Excise Levy for Advertising.—It was reported to the meeting that strenuous efforts were being made to impose a levy on all fruit sold, the proceeds of the levy being devoted to an advertising campaign in England.

On principle the meeting objected to a compulsory levy.

New Zealand Embargo.—The serious effect of the embargo on the entry of citrus fruits to New Zealand to Mandarin growers was referred to by many members. The Fruit Fly is not

found in either the Hawkesbury or Hills Districts during the months of June, July, August or September, and it would therefore be quite safe to export Mandarins to New Zealand during those months. It was decided to take this matter up with the Minister for Agriculture in an endeavour to have the embargo lifted for Mandarins during that period.

GIFT ORANGES FOR ENGLAND.

The Victorian Central Citrus Association advises that again this year arrangements have been made for the transfer of gift cases of Washington Navel Oranges to residents in Great Britain. The cost (inclusive of all charges) is 23/- per case. Under an arrangement with the Murray Citrus Growers' Association, orders are being taken for delivery in Britain during August next.

HIGHER QUALITY CITRUS.

Probable Improvement in Mildura District.

The general manager of the V.C.C.A., Mr. A. W. Schwennesen, who visited Mildura district early in May, remarked that a pleasing feature of the crops in that district was the expected higher quality of the Sunraysia pack.

Commenting on the season's prospects generally, Mr. Schwennesen said that he expected the 1938 navel crop would be slightly higher than in 1937, and the Valencia crop slightly lower. He did not think, however, that the falling-off in Valencias in Victoria would influence the Melbourne market, as it would be offset by increased supplies from other districts.

CITRUS BUD SELECTION.

Growing Demand.

Reports to hand from nurserymen show that there is an increased demand by growers, and a corresponding demand by nurserymen, for citrus buds for the present propagating season from the New South Wales Citrus Bud Selection Society.

Statistics show that figures have risen from 36,700 buds in 1934 to 74,500 in 1937, and 94,500 for the 1938 season. This is made up as follows:—34,250 Washington Navels, 43,750 Valencias, 12,000 Eureka Lemons, 1,000 Lisbon Lemons, 1,500 Marsh's Grapefruit, and 2,000 Emperor Mandarins.

It is noted that Joppa Oranges, Villa France Lemons and Glen Retreat Mandarins, were very popular in Queensland, possibly owing to the more favorable climatic conditions. There was no demand whatever for these varieties in New South Wales, South Australia, and Victoria.

COOK ISLAND ORANGES.

Land in Bad Order.

A report from Auckland, dated May 7, states that 25 per cent. of a large shipment of Oranges from Cook Island, consisting of some 25,000 cases, had to be destroyed as unfit for human consumption. Since the finest is now packed under Government inspection it is anticipated that this will mean a great loss to the N.Z. Government.

N.S.W. CITRUSGROWERS' DEFENCE ASSOCIATION.

A meeting of the Executive of the Citrusgrowers' Defence Association was held at Hornsby on Saturday, April 30. Mr. W. J. Black (President) took the chair.

Hours of Marketing.—The new opening hours of the City Fruit and



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Pruning Pear Trees

Broad Base Best

Leaders :: Spurs :: Laterals

PROBABLY one of the most common faults met with in orchards of Pear trees is the narrowness of the trees immediately above the crown, says the "S.A. Journal of Agriculture."

Too long pruning during the first and second years and insufficient attention to means for broadening out the basal growth usually results in the formation of a far too narrow type of tree.

If the straight rods so often received from the nursery are topped about knee-high or about 18 in. from the ground, the opportunity is provided by subsequent hard cutting to develop a fairly broad base. Width just above the crown is desirable, so that the main branches can be carried upward in a manner which will result in the formation of a moderately open tree. Such a type supplies ample room for the later development of spur clusters along the main arms, both inside and outside the tree. Consequently, as the lighter laterals are shortened back after maturing, their fruit buds and the spurs are produced, the weight of the crop is developed where it will impose less strain on the branches.

This, of course, necessitates the encouragement of a sturdy framework growing well outward and upward. There is, perhaps, a greater tendency for the growth from the top buds of a shortened branch to push upward than with the majority of fruit trees, and unless means are taken during the early years of tree formation to counteract this, somewhat narrow trees are bound to result, but by the systematic adoption of the practice of cutting back each season, so as to turn the outward laterals to take the place of the leading shoots, a fairly well-spaced tree will usually result.

The practice referred to is generally applicable to the pruning of most varieties of Pears during the early two or three seasons of growth. It will be noticed on the growth of most trees that when a leader is shortened, the ensuing extension from the uppermost bud retained is decidedly more upright than is the growth from the buds immediately below. This occurs irrespective of the position of the buds, whether they are situated on the inside or outside of the tree. This is apart from the natural predilection of growth to turn to the light. Assuming that a straight rod has been topped about 15 in. or 18 in. from the ground, the growth from the three uppermost buds, and possibly from a fourth, will supply the initial framework of the tree. These buds are situated spirally round the stem or trunk, and they will provide the main arms which constitute the crown of the tree. Consequently they require to be set in stoutly. By cutting them back hard, they will thicken up and provide a strong foundation for the main branches.

Early Pruning.

The retention of only a few buds on an upward piece of the previous season's growth is followed by a greater vigor in the subsequent extensions from the buds. Thus, if only about half a dozen buds are retained, the growth from these will be considerably stronger than when lengths containing double the number of buds left.

The second fact that is of particular value during this stage of a tree's growth is that the uppermost bud will produce the most vertical growth. That from the bud immediately below will swing out at a wider angle. Consequently, if this second growth is availed of to form the leader, the base of the crown may be widened. Thus, if advantage is to be taken of this natural habit of growth, the three or four growths forming the crown should be shortened into buds immediately above others situated on the outside of the branches or main arms.

These are allowed to grow unhindered during the season following pruning, but at the next season's pruning the uppermost shoots are cut out, so as to leave the extensions from the second and outward buds as the new leaders. These in turn are similarly shortened in, so as to again derive the advantage of the wider angle of growth from the buds in the outer positions. Thus the first year's pruning will result in the retention of about 6 in. of growth, and at the second season's pruning, 8 or 9 in. of leader extension may be retained.

It is seldom necessary to continue this practice of selecting the leader from the under outward bud extension beyond the fourth season, for by this time a nice open base about the crown of the tree will have been developed. The continuance of the leaders may thereafter be in a gradual outward and upward direction, the length of growth retained on each leader being determined by its general vigor. At some time suitably spaced side laterals may be selected to provide the secondary arms, thus steadily increasing the number of leaders. This method of increase may be continued until a dozen or more well-spaced leaders have been obtained. From these, light laterals may be retained uncut to assist with the natural spur development in furnishing the branches with an adequate supply of fruiting wood.

Extension of Leaders.

After each season's pruning, when once the desired number of leaders has been obtained, there should remain only one extension from each of these main branches. Strong-growing upright laterals situated immediately below the one selected for the extension should be cut right out. Usually the one retained should be topped, though when a tree is somewhat slow in building up its spur development,

they may be allowed to remain uncut for a season.

This temporary check to the sap flow will frequently have the effect of assisting the formation of spurs. It is only occasionally that the adoption of this course is desirable, for if the annual extension of the leaders has not been unduly long spur and light lateral development will take place. It is only during the first three or four years that these strong growing laterals are required. They are then used to multiply the leaders until the desired number has been obtained, and from that time onward they should be treated as leaders, pruning them to single terminal growths as they are extended each season. It is mainly about the middle and lower portions of a tree that growth is wanted. In these positions it may be used to encourage the fruiting habit.

When, however, a few upright laterals are allowed to remain near the top of the tree, they merely become competitors with the leaders, and in place of a single extension to draw the sap flow, the plant food required to nourish and extend these growths must be drawn from below; and consequently the more horizontal laterals and spurs suffer as a result of the sap required by the unproductive growth about the top of the tree. Whereas the effect of a single leading growth is to check and regulate the supply of sap so that a reasonable share becomes available for building up the fruiting parts.

Several terminals at the top of the leader make use of the sap and so deprive other more valuable parts of the tree from obtaining their due share. Later there is a tendency toward partial barrenness in the lower portions, and to overcome this, it is often necessary to cut back hard, and so turn and check the sap flow.

Spurs and Laterals.

While most varieties of Pear trees will furnish up spurs naturally from direct off the main branches, laterals may frequently be used to increase the fruiting surface of the tree. Any such spur formation should be maintained as near to the main branches as possible, for the greater the distance that a spur cluster is from its source of food supply, the weaker will be the buds and the poorer the class of fruit produced. Horizontal or flat-laying laterals are most suitable for increasing the number of spur growths. These may be shortened, and later the growth may be turned into a weaker extension which will usually cause spurs to develop between it and the main branch.

When once clothed with spurs, these growths may gradually be shortened back. The retention of moderately strong laterals, which later may be shortened in, is often of assistance in causing the tree to bear. Since cutting promotes growth such laterals as are retained temporarily are better allowed to remain uncut until they are spurred or removed. The readiness with which spur clusters on the Pear extend and duplicate themselves as they increase with age renders it necessary that they should be frequently reduced. As a rule, these spur clusters will continue to extend and branch from year to year, with

Pruning Deciduous Fruit Trees

Early Start Advised.

IT is always advisable to keep ahead with various orchard operations, and the pruning of deciduous trees should be commenced as soon as possible. Preparatory to pruning it is advisable to put in order all tools required for the work, states the "N.S.W. Agricultural Notes."

When pruning young trees the main aim should be the development of a good framework with well spaced limbs. This not only conduces to the health of the tree, but it also facilitates picking, spraying and cultural operations. A tree with a good framework provides a good bearing surface and is better able to carry its load with less danger of bent or broken limbs.

Newly planted trees should have their leaders cut well back, and this should be repeated each pruning season until the tree has developed a good "foundation" with a sufficient number of limbs. Besides observing the foregoing sound general rule, it is necessary to study the requirements of each tree, for each has its own individuality which the pruner, to be successful, cannot ignore.

Some trees will be found to be making rapid growth, whilst others grow slowly, some have an upright and others a spreading habit of growth, some will be weak on one side and strong on another, some will be found almost limbless on one side and develop crowded limbs on the other. To get the best results the pruner should first envisage the tree as a whole, form a mental picture of the ideal tree which he wishes it to become, and then prune it accordingly.

In the pruning of older trees the characteristics of the particular varieties and kinds must be taken into consideration. Peaches, for instance, crop only on the previous year's growth, and the older wood, unlike that of the Apple and the Pear, will not retain a permanent self-replacing spur. In old Apple and Pear trees it is sometimes necessary to thin out fruit-bearing spurs which otherwise would become too crowded. So many factors influence the development of a tree—soil, location, vitality and the general treatment the tree receives, that each must receive the individual treatment which will enable it to produce to the best advantage.

the result that these fruit-producing parts are steadily extending some distance from their base.

The wood between the main arms and the bud terminals becomes harder and crinkled, and as a consequence the sap flow is to an extent checked, and the general vitality of the spur is much impaired. Since it is a good sound policy to have the fruit buds some distance from the source of food supply, these spur clusters should be shortened in frequently, reducing them to perhaps half a dozen well-spaced buds. Much, of course, depends on the extent to which the main arms are furnished with this desirable class of wood, and the extent of thinning or of the elimination must largely be determined by the general spacing of the spurs.

Regulating to guard against overcrowding is the main consideration, and this, with the frequent reduction of the branching spurs to keep them reasonably close into the main arms, will result in a more regular cropping and the production of a better class of fruit.

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Investigation on the Storage Ripening and Respiration of Pears

By G. B. Tindale, B.Agr.Sc., S. A. Trout, M.Sc., Ph.D. and F. E. Huelin, B.Sc., Ph.D., in the "Victorian Journal of Agriculture."

(Continued from March, April and May issues.)

Recommendations for Export.

Pears intended for export are required by regulation to comply with certain standards regarding freedom from blemish and disease, size, etc. In addition to these regulations other conditions should be observed. The Pears should be picked at their optimum stage of maturity, for at this stage they combine long keeping qualities with good quality on ripening after removal from cool store. Pears picked at the optimum stage of maturity are still deep green in color, but, in view of the fact that they are green from the time they are first formed until they are almost fully grown, a better guide than color for picking is required.

As a result of picking trials extending over several seasons, it has been found that the simplest and perhaps the most accurate guide to picking is a picking date, picking to commence a week before and to finish a week after the stipulated time. This allows two or three pickings to be made from each tree, and if the largest fruits are picked first the smallest fruits will have gained considerably in size when the last picking is made.

The optimum picking date does not vary by more than one week from year to year, being early in some seasons and late in others. The optimum picking dates (average of several years) for some varieties in Victoria are:—

- W.B.C.—First week in February.
- Howell—Mid-February.
- Packham—End of February.
- Bosc—First week in March.
- Winter Cole—Mid-March.
- Josephine—Third week in March.
- Winter Nelis—Last week in March.

It is most important to cool the Pears as promptly as possible after picking. If some days elapse between picking and cooling, the Pears will ripen, especially during warm weather, and the subsequent cool storage life is thereby considerably reduced. This cooling of the fruit prior to shipment is termed "pre-cooling," and prompt pre-cooling is undoubtedly one of the most important factors in aiding the development of the Pear export trade from Victoria.

It is important to recognise that the cool storage life of Pears depends not only on temperature, but also on variety. The storage life of the various varieties at 32 deg. F. and 34 deg. F. is:—

Variety.	Storage Life at 32 deg. F. Months.	Storage Life at 34 deg. F. Months.
	Months.	Months.
W.B.C.	3½	2½
Howell	3½	2
Bosc	3½	3
Comice	4	3½
Packham	4½	4
Anjou	4½	4
Madame Cole	4½	4
Winter Cole	5½	5
Josephine	5½	5
Winter Nelis	6	5½

While the longer storage life is obtained at 32 deg. F., yet, from the export point of view, it is important to take into account the storage life obtained at 34 deg. F., because temperature records taken in ships' cargo spaces show that it is impossible to maintain an entire space at 30 deg. to 32 deg. F., and many Pears are carried at temperatures ranging up to 34 deg. F.

For local storage, Pears are held at 32 deg. F. and the same temperature has been adopted for pre-cooling Pears for export. While this temperature is recommended for chambers specially set apart for pre-cooling Pears, it frequently happens that Pears are pre-cooled to 32 deg. F. alongside Jonathan Apples intended for local storage. At this temperature the Jonathan is very subject to both scald and breakdown, and under such circumstances, it is advisable to pre-cool the Pears to 34 deg. instead of 32 deg. F., in order to avoid much of the trouble usually experienced with Jonathan Apples.

Pre-cooling to 34 deg. F. instead of 32 deg. F. would have little effect on Pears shipped within a few weeks of pre-cooling, or on the long-keeping varieties like the Winter Cole, Josephine, and Winter Nelis, if these varieties were reserved for the last ships.

Pears must reach the overseas market before their storage life has terminated, for, although they may be of perfect appearance after this time, they will ripen abnormally either with poor flavor and juice or with the development of core breakdown and scald. In preparing a table for the last date for shipping, allowance has been made for at least six weeks for shipping the Pears, and a marketing (wholesale and retail) period of three weeks overseas, and it has been assumed that more Pears are carried at 34 deg. F., approximately than at 32 deg. F. Thus if nine weeks are deducted from the storage life at 34 deg. F. for each variety, the latest date for shipping each variety is as follows:—

- W.B.C.—Mid-February.
- Howell—First week in April.
- Bosc—Mid-April.
- Packham—First week in May.
- Winter Cole—First week in June.
- Josephine—Mid-June.
- Winter Nelis—Mid-July.

By shipping the Howell and Bosc first, then the Packham and Cole, and finally the Josephine and Nelis, the market could be continuously supplied with Pears arriving within the limits of their storage life, and hence ripening with that degree of lusciousness and flavor typical of the variety. There has been a tendency recently to spread the market further by forwarding on late ships, and the variation in storage life between the different varieties has been overlooked, with the result that some varieties have been shipped too late. A buyer purchasing a line of overstored Pears, which no doubt are of perfect appearance, finds that instead of ripening with the usual excellent qualities, it develops core breakdown or even scald, with no flavor or juice. The buyer, being a heavy loser, would condemn the variety, and probably avoid its purchase in future years. The same variety shipped a little earlier would have arrived within the limits of its storage life, and would have ripened with its usual excellence.

Referring to the W.B.C. Pear it will be seen that the storage life of this variety at 34 deg. F. is so short that there is very little margin of safety for export. Even though it may arrive overseas within the limits of its storage life, there is still the problem of its ripening. At the time of its arrival in England and the English warehouse temperature is approxi-

mately 45 deg. F., which is far too low for the normal ripening of W.B.C. Pears. Thus controlled, ripening would be required, but a ripe W.B.C. is a most delicate fruit to handle, and the trade dislikes handling such an easily bruised fruit. Perhaps some retailers would attempt ripening, but few would instal equipment for such a minor business.

The other varieties have a much longer storage life, and will ripen at temperatures considerably lower than that required for the W.B.C. Moreover, as they are shipped later, they arrive in England when the temperatures are higher, and artificial methods for ripening are therefore not necessary. Thus, while there is an abundance of the later longer-keeping varieties, the export of the W.B.C. variety is not recommended.

After packing, the Pears should be returned to the cool chamber and promptly forwarded to the ship's side when required for shipment. The ideal method of transport is by means of an iced insulated truck, but sometimes where the journey is short an ordinary motor truck can be used, the fruit being covered by a tarpaulin. What really counts is the rise in temperature which occurs during transport of the fruit from the cool store to the ship's hold. Some rise is unavoidable, and any method of transport is satisfactory provided the flesh temperature at the time of loading into the ship's hold does not exceed 40 deg. F.

The ship should carry the Pears as close to 32 deg. F. as possible. Temperatures lower than this are not recommended, owing to the risk of the fruit being frozen.

Summary.

The optimum picking time for the main varieties of Pears has been determined.

Color at the optimum picking time has been consistent, but pressure and chemical composition have been variable from year to year.

The date of the optimum picking time did not vary by more than one week from year to year, and picking to a definite time table is recommended.

Pears picked at the optimum stage of maturity combined relatively long storage life with good quality on ripening.

Most varieties of Pears did not ripen at 32 deg. F., but had to be removed to higher temperatures in order to develop good flavor and juice.

The maximum length of time fruit can be kept in cool store and still ripened normally on removal to higher temperatures is termed "the cool storage life." Pears left in cool store after the termination of storage life may still be free from blemish, but will develop the physio-

logical disorders of mealiness, core breakdown and scald on removal to higher temperatures.

The length of storage life is a function of variety, temperature of storage, maturity at picking time, and the delay between picking and cooling.

The length of storage life at 32 deg. F. of W.B.C. Pears picked at the optimum stage of maturity was 3 months, Bosc 3½ months, Packham 4½ months, and Winter Nelis 6 months. The storage life of these varieties was from six to eight weeks less at 37 deg. F.

Delaying the picking time and delaying the storage after picking reduced the subsequent length of storage life.

Changes in color, pressure, chemical composition and respiration occurred during storage. The rate of change was dependent on the storage temperature.

At the termination of storage life at 32 deg. F., most varieties had a trace of green color, and the pressure had fallen four pounds.

The rate of respiration increased in store until it reached a maximum termed the "climacteric," and then decreased, until in some cases there was no liberation of carbon dioxide, i.e., death occurred. The death of the Pear in store was characterised by the development of scald.

The length of storage life of all varieties except the Winter Nelis, which partially ripened at the low temperatures, was approximately three-fifths of the time that the fruit took to reach the climacteric and two-fifths of the time till the development of scald in store.

To be of marketable value Pears should be removed from store a considerable time before disorders appear in store.

The minimum satisfactory ripening temperature for the main varieties of Pears has been determined, and was 60 deg. F. for the W.B.C., 55 deg. F. for the Bosc, 45 deg. F. for the Packham, and 37 deg. F. for the Winter Nelis and Josephine varieties. The time taken to ripen is a function of temperature, variety, and the conditions which prevail prior to ripening.

Temperature had a much greater effect in retarding the ripening of Josephine and Winter Nelis varieties over the range 45 to 37 deg. F. than over the range 65 deg. to 45 deg. F.

Changes in color, pressure, respiration and chemical composition occurred during ripening.

The fall of pressure during ripening may be of value in forecasting the termination of storage life, as the fall in pressure in the W.B.C. Pear was greatest at 65 deg. F. after the third day in the early removals from 32 deg. F., and after the first

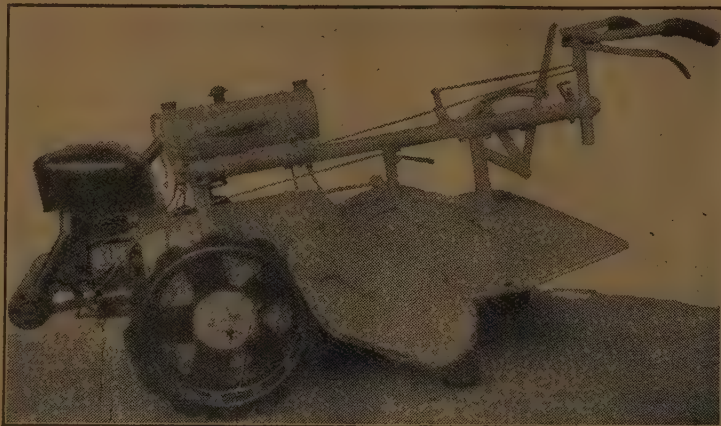
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day, in removals made just prior to the termination of storage life.

Normal ripening was accompanied by increases in cane sugar, alcohol, and acetaldehyde, but in abnormal ripening there was little change in cane sugar, and the alcohol increased more rapidly, reaching 0.1 per cent. at the onset of core breakdown.

It is essential that the Australian W.B.C. Pear should be conditioned or ripened under artificial conditions in England, as the prevailing warehouse temperatures at the time of its arrival are too low for the normal ripening of this variety.

After a conditioning treatment of two to three days at 65 deg. F., the W.B.C. Pear ripened satisfactorily subsequently at 45 deg. F.

For canning, W.B.C. Pears should be picked green, cool stored and conditioned after removal from store if the prevailing atmospheric temperatures do not exceed 55 deg. F.

There have been indications that there is greater wastage in the inner layers of W.B.C. Pears than in the outer layers against the wood when the Pears are ripened in the standard Pear case, and development of wastage can be delayed by unpacking the case before ripening. There have been no significant differences in wastage between the inner and outer layer of Pears in the flat case.

Storage at 32 deg. F. in an atmosphere containing 5 per cent. of carbon dioxide has prolonged the life of four varieties by about 50 per cent. Higher concentrations, which might cause "brown heart," are to be avoided.

Temperatures taken by electrical resistance thermometers placed in cases in different positions in ships' cargo spaces have indicated that a considerable time elapsed before even a pre-cooled cargo reached a steady temperature of 31 deg. to 32 deg. F., and the usual variation in temperature between different positions is approximately 2 deg. F. in the steady state.

Certain conditions should be observed during the picking and handling of Pears for export. It is most essential that Pears should be picked in a hard, green condition and pre-cooled as soon as possible after picking.

For the overseas transport of Pears a temperature of 31 deg. to 32 deg. F. is recommended, and the temperature conditions in the cargo spaces should be as closely controlled as possible.

Acknowledgments.

The authors wish to acknowledge the Orient, P. and O., Blue Star, Port Line and Ellerman and Bucknall shipping companies, Messrs. S. J. Perry and Co., and the Southern Victorian Pear Co., for their assistance with the experimental shipments overseas, the British Food Investigation Board for many careful examinations of experimental consignments, Mr. E. Thiele, of Doncaster, who made available certain trees for the maturity experiments, and also Professor W. J. Young, Dr. J. R. Vickery, Messrs. F. M. Read and S. Fish members, and Mr. D. B. Adam, a former member of the Advisory Committee on Fruit Storage Investigations, for their valuable help and advice.

EXPORT SUGAR REBATE.

The Export Sugar Committee has decided to fix export sugar rebate as from June 1, 1938, as under:—
New Zealand:

Fruit products, £5/19/- per ton.

Other goods, £8/3/- per ton.

Other Destinations:

Fruit products, £19/6/- per ton.

Other goods, £21/10/- per ton.

NEW SOUTH WALES

Murrumbidgee Irrigation Areas

Good Citrus Crops—Conference Results— Fumigation for Red Scale

(By Our Special Correspondent.)

THE WEATHER in these districts has continued dry, and although some few districts surrounding have been favored with isolated heavy thunder storms, these have passed over the irrigated areas.

Many growers have given extra irrigations owing to the prolonged dry spell, but the general absence of green cover crops this season is very marked, many growers fearing a dry frosty Winter.

Practically all table Grape crops, which have been particularly fine this year, have been harvested, and prices have ranged somewhat higher than in previous years, up to 8/- per half-bushel case being obtained by some growers for their Cornichons.

Thompson Navels are now being picked, having passed the necessary test to ensure them being marketed, and the various companies handling the citrus fruits expect to have all fruit of this particular variety in the packing sheds by May 31, the Griffith Producers finalise the "Thompson Pool" by that date.

The fruit is sweet and palatable, and has a particularly fine appearance this year, having colored earlier than usual.

Washington Navels are coloring up early, and are testing fairly well, being full of juice, and generally are likely to incline towards a larger size than is generally the case, although where a heavy crop is being carried the size is even and smaller and the quality of all Oranges seems to be exceptionally good this season.

Lemons are going into the sheds in fair quantities, and are in most cases carrying good crops, and growers are relieving their trees of the earlier colored fruit, to assist in the sizing of the remaining portion.

Local prices are only moderate, and no bounty having yet been declared, the companies are awaiting confirmation on this matter before packing for export.

The Valencia crop shows no marked difference than previously reported and is ranging from good to a few heavy crops on some of the better class of soil. The fruit has not colored as early as it did last season, and is so far inclined to be on the small side.

On some farms Navels are still quite green, and should prove useful in carrying over throughout the season for the New Zealand and local markets.

Several sharp frosts occurred during the early part of the month, and large fields of Peas and Tomatoes, which were being grown for the Sydney market were cut somewhat severely, yet in other portions of the Area, the

frost seemed scarcely to have touched the crop, and some growers are still sending away good samples of well-filled pods, and where water has been applied or was in evidence on the blocks during the cold frosty snap of weather, a new growth has resulted which is in some cases showing fresh flowers.

Prices for Peas during the latter part of April and early in the present month ranged from 9/- to 12/-, with a few very choice as high as 14/- per bushel for a short period, and the prices generally were satisfactory to the growers this season.

The annual meeting of the District Branch of the Fruitgrowers Federation was held in the C.W.A. Hall on May 13, and a series of resolutions were passed. Mr. K. H. Todd presided.

The following resolutions were agreed to:—

1. "That more consideration be given to the progress of the season, when fixing the opening date for the export of Apples, with a view to shipments being made at the earliest possible date commensurate with proper maturity."

2. "That the Board of the Federation investigate and take any necessary action regarding the National Insurance Bill that will secure to small fruit farmers the benefit of the legislation."

3. "That the City Council continue its experiment in enforcing a uniform opening hour at the City markets."

4. "That the fertiliser bounty be altered so that the basis is percentage of landed cost, instead of a flat rate per ton."

5. "That representations be made for the early enactment of a Fungicides and Insecticides Bill."

6. "That a request be made for inspection of export fruit to be carried out at the point of packing, and that such inspection to be final unless the fruit is held for more than a fortnight before shipping."

Messrs. Wilkins and Watters (Yenda) and O. E. Hawkins, A. C. Hastings, A. J. Lenahan and P. C. Cox were elected delegates to represent the district at the forthcoming annual general conference in Sydney. Mr. K. H. Todd was elected for appointment to the Board.

Col. E. E. Herrod, Secretary of the Federation, was present.

Mr. Dornan, from Hurstville, at one time a grower of citrus on a large scale at Gosford, was an interested visitor to these Areas during the present month.

It is eight years since Mr. Dornan last visited the district, and he expressed astonishment at the astound-



Nursery bed of 5,000 budded Walnut trees at the nursery of Mr. L. J. Wicks, Highbury East, South Australia.

ing growth and development of both Leeton and Griffith.

When visiting the Leeton Cannery he was particularly struck with the efficiency of the management and the general lines on which the place was now run, and expected to hear of a still greater output of fruit than even the present season's results.

The great development in the Rice industry, and in the sowing down of Lucerne and pastures on the larger area farms was also a matter of astonishment to him, and another strong advocate for visitors from the capital cities to come and see the area for themselves, was enlisted to boost these wonderful settlements.

The spray system of irrigation which is not used on any other fruit areas generally calls for comment from visitors who see this type of plant in action, and the simplicity and ease with which it is manipulated is a matter of interest to growers from other areas. The fine penetrating spray which is thrown from a perforated pipe gives a very even and thorough soaking to the land, and little or no run off of surplus water is noticed.

This system will probably come into greater use when more generally known, and the results obtained from the installation of this type of spray can be seen on several of the largest and best citrus farms on these areas.

Dr. Currie, Officer in charge of the Weeds Section of the Council of Scientific and Industrial Research, visited Griffith and Leeton during the month, and with Mr. Prunster, the Officer who is investigating the treatment of the Cumbungi pest on these areas, made some investigations into various weeds during his visit to the Research Station.

Dr. Currie also favored the Constitutional Association with a very interesting lecture at night, on "Weeds at Home and Abroad," and much information of value was obtained to growers in the treatment of the various weed problems which are proving very difficult to deal with on some portions of the irrigated farms.

A very great number of citrus trees have been fumigated this season, on both ends of the Area, the Griffith Producers gangs alone having treated over 84,000 trees, and private con-

tractors, and growers, some of whom have their own fumigating outfits, have accounted for many thousands more.

The full list of trees thus treated on both ends of these areas are not yet to hand, but will be reported at a later date.

The absolute necessity of this means of control for red scale is being more fully realised every season, and a strong effort to organise a system of "sectional control" is being discussed.

By this means it is hoped that the pest may become at least a minor pest even if a complete control is not effected, for with one man fumigating this season, and his neighbour leaving the work for the following one, because no apparent infestation is there, after a previous season's treatment, leaves a loophole for fresh infestation.

If an organised system can be evolved by which every grove in certain zones can be fumigated in the same year, thus making a clean sweep of a particular area, then there is a chance of combating this serious menace to the citrus industry, but if the haphazard system which at present is being followed is continued, then there will be no hope of thorough clean up in spite of the continued vigilance of inspectors and the enforcement of the Departmental regulations.

Some farms which have missed one year, after two years of fumigation are showing heavy infestation again this season, and it is apparent that a more comprehensive method of dealing with the affected areas in "zones" or "blocks" will have to be done.

Most of the growers are fully aware of the importance of such a system, and will wholeheartedly support it.

TREES.

I think that I shall never see,
Along the road, an unscrapped tree,
With bark intact and painted white
That no car ever hit at night.
For every tree that's near the road
Has caused some auto to be towed.
Sideswiping trees is done a lot
By drivers who are not so hot.
God gave them eyes so they could see,
Yet any fool can hit a tree.

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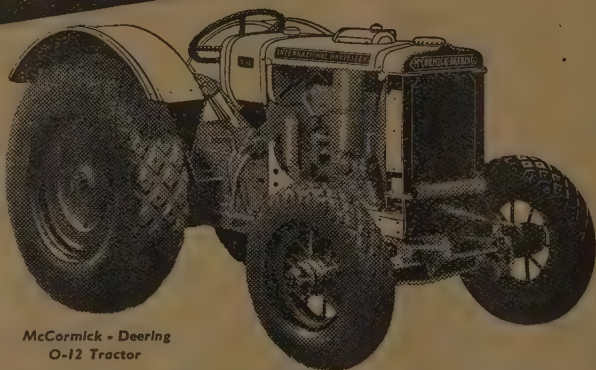
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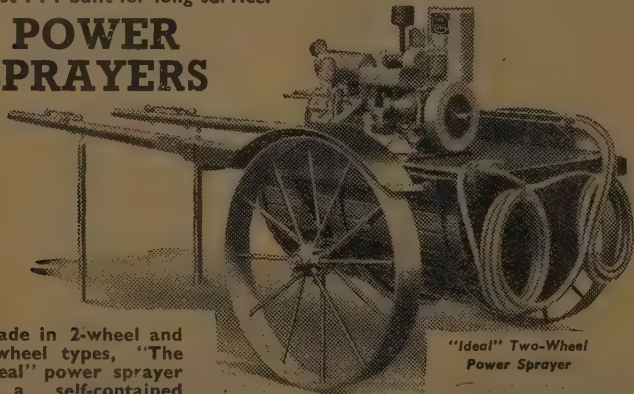


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NEW SOUTH WALES - (Continued)

PEACHES TOO SMALL.

Corrective Measures in Leeton Orchards.

IN his report to the Leeton Cannery Board the general manager submitted a report on the past season's pack, with recommendations for improvement.

The report stated that although many growers were producing fruit of the size required, others were sending in fruit below the standard size, and this was causing embarrassment to the cannery and loss to the growers. A warning was given that the margin of tolerance allowed previously could not be continued next season, and growers were advised to alter their methods of pruning. Arrangements had been made for a suitable water-roster, but this would not bring the desired result unless growers refrained from over-working their trees. The report concludes:—

"It has been previously announced that in future the minimum size acceptable for red centre Peaches will be two and three-eighths inches, and for the yellow centres two and one-quarter inches. This is the standard that will be adopted for next season, and growers must not expect to receive the margin of tolerance which was allowed during the past season. In normal seasons these requirements will not present any serious problem to the growers who adhere to an effective routine of orchard practice. On the other hand there are, it must be admitted, other growers who will need to carry into effect some drastic reforms in their methods before their production can be established on a more regular and profitable basis. It must, however, be evident that such a revision will be well worth the extra effort demanded. These thick crops of small unsaleable fruit carried on trees which have been insufficiently pruned, only exhausts the trees and limits the formation of fruit buds for the next season."

BATLOW.

The Batlow Agricultural Society held a successful Show—after a lapse of five years—the entries being well up to standard. Mr. H. V. Smith, the judge in the fruit section, remarked that he had never seen such a fine display of Granny Smith Apples, even at a Royal Show. Another feature was the splendid pyramids, 24 entries being received in this class.

Principal awards include:—

Fruit Collection, Packhams (case for export), E. M. Herring; Collection of Apples, Tasman 2½ in. and 3 in. (best and largest), Lalla 3 in.; Winter Coles (best and largest), Packham's Triumph (best and largest), Josephine, 2½ in. and best and largest, C. C. Barberie; Pyramid Jonathans, 3 in. Winesap, Vanzella Bros.; Pyramid Granny Smith, 2½ in. and 3 in. Jonathan, 3 in. Granny Smith, also best and largest, 2½ in. Rome Beauty, Apples, a.o.v., Winter Coles 2½ in., 2½ in. and 3 in. Packham's Triumph, Slingstone Peach, E. Pursell; Pyramid Delicious (best and largest), C. McD. Stuart; Pyramid and Variety, F. G. Bowman & Sons; 3 in. and 3½ in. Granny Smith, L. Cash; Tasma (best and largest), 2½ Winesap, largest sound Apples, dozen Colored Apples, dozen green Apples, export case Granny Smith, export case Winter Coles, 2½ in. Winter Coles, N. R. Herring; 3 in. Rome Beauty, H. O. Quarmby; Best and Largest Rome Beauty, Sunnyside Orchards Ltd.; Dougherty, 2½ in. Collection Pears, 2½ in. and 2½ in. Winter Nells, any variety (dessert) Pears, T. W. Robson; Clingston Peaches, Mrs. C. Ehmson.

SEASONAL REPORT FROM N.S.W.

Young district suffered heavy losses recently by cyclonic conditions. Late varieties of Apples suffered during harvest. This was followed by fair rains, but budding did not benefit to any extent. Batlow records damage by hail and depreciation of quality resulted. Citrus quality was reported good in most districts.

In the Murrumbidgee Irrigation Area the weather was very changeable and maturity and coloring in citrus fruits was a fluctuating process. On the whole, good yields were anticipated. Banana consignments were light to medium and less than April.

Market Conditions.

The cold weather in early May was responsible for slackness in business and reduced turnover. Pears firmed and sold freely. Tomatoes weakened, lacking in color. New season citrus suffered a reaction following good sales. Grape consignments from the Murrumbidgee Irrigation Area were steady, but the demand was light. Cornichon and Black Muscats lapsed to 4/- to 5/-.

HAWKESBURY.

Fruit awards at the 58th Show of the Hawkesbury District Agricultural Association were:—

Apples—Granny Smith, Dessert, Quinces, Tomatoes: C. W. Devlin. Oranges, White Siletta and Late Valencia: Clarrie McMahon. Washington Navel, Pomegranates: E. T. Beecroft. Oranges, late Valencia, late and main crop, a.o.v.: E. T. Beecroft. Collection Oranges, Mandarins, Lemons (main crop): Z. Y. McMahon. Seville Oranges, rough and smooth skin: R. S. Warnock. Emperor Mandarins: R. B. Turnbull. Thorny: S. Howell. Lemons: Lisbon, C. McMahon; ditto, second crop, F. Hearne; sweet rind (main crop), C. W. Devlin; ditto, second crop, C. McMahon. Persimmons, bun and a.o.v.: Lloyd Smith. Fruit Collection: A. Smith, jun. Case Navel Oranges and Pyramid of Citrus Fruits: Lloyd Smith.

FRUIT INQUIRY.

Mr. J. McCulloch, accompanied by Mr. C. G. Savage, Director of Fruit Culture, visited Tenterfield early in May to continue the inquiry into the fruit industry.

The Secretary of the local Fruit-growers' Association, Mr. Harold Sommerlad, submitted evidence and stated the district's objection to the continuance of orchard registration. Mr. W. G. Geyer regarded officers of the Department as a great help to the orchardists. Messrs. T. W. Sewell and E. A. Sommerlad gave details of culture, yields, costs of marketing and production, and conditions in general.

The Commissioner inspected several orchards at the termination of the sitting.

N.S.W. ANNUAL CONFERENCE.

Tablelands Fruitgrowers' Suggestions.

The Central Tablelands fruitgrowers met at Molong on May 20 to discuss questions to be considered at the annual conference in Sydney on June 22 to 24. Amongst other matters, delegates favored the following recommendations:—

Fruit passed for export by the local inspector should not be again inspected if shipped within one week, except for condition at ship's side. That the C.S.I.R. be asked to study the utilisation of waste fruit on the orchard with a view to turning present waste losses into profit.

Quarterly Reports N.S.W. Irrigation Areas

The following reports have been received from the N.S.W. Chairman of the Water Conservation and Irrigation Commission through the Department of Agriculture.

Curlwaa.

Unusually dry and warm weather prevailed during the quarter ended March 31, 1938, resulting in one of the best fruit drying seasons experienced for many years. Normal crops of vine and deciduous crops were harvested. The quantity of Sultanas placed with the packing sheds was exceptionally high, owing to the favorable weather conditions.

Reports from the local packing shed indicate that a record crop of citrus fruit was harvested, and prices throughout the season were very satisfactory to growers. Prospects are that an equally heavy crop will be produced this season. Rainfall for the quarter totalled only 88.5 points, of which 61, 17.5 and 10 points fell in January, February and March respectively.

Coomoalla.

Very dry weather prevailed throughout the quarter ended March 31, 1938, the total rainfall registered being 93 points, of which 69, 14 and 10 points fell in January, February and March respectively.

High temperatures generally were experienced which with the absence of rain resulted in probably the most favorable drying season experienced on the settlement. Many heavy crops of Sultanas were realised, the quality of this fruit being well above the average, and many settlers getting much higher gradings than usual. Weather conditions resulted in fruit being placed with packing sheds earlier than usual, and only a small percentage still remains on holdings.

The work of establishing the deep drainage scheme at Coomoalla is proceeding satisfactorily. The engine and pumping apparatus has been installed at the pump well and a building to house the plant has been erected. The manufacture of concrete pipes has been completed by the contractor and large quantities of earthenware pipes are being received from the contracting firm. The work of laying the first line of underground pipes is proceeding, and will probably be completed by the end of June.

N.S.W. BANANA MARKETING BOARD.

Election Ballot on July 29.

The N.S.W. Minister for Agriculture announces that a poll will be taken on July 29 for the election of producer-members on the Banana Marketing Board. Lists of producers entitled to vote are now available, and claims for enrolment will be received up to June 10 next.

INDUSTRIAL EXPLOITATION OF ORANGE JUICE IN EGYPT.

The Ministry of Commerce and Industry had recently caused experiments to be made with a view to the industrial exploitation of the juice of Egyptian Oranges. The results were satisfactory and a juice was produced which is suitable for export and contains more vitamins than other products of this kind which were so far imported.

Also an oil was produced from the Orange skins which is used for many purposes, and which was hitherto imported.

The experiments have also led to the production of a mixture of Orange juice and mineral water, which beverage the Ministry is trying to sell on foreign markets.

DRIED FRUITS NEWS & NOTES

Publicity for Dried Fruits

Sustained Campaign Yields Good Results

Numerous Forms of Propaganda

TO increase the sale of dried fruits in the Commonwealth, the Dried Fruits Publicity Committee, consisting of the Chairman of the State Dried Fruits Board of New South Wales, Victoria, South Australia, West Australia, and the Chairman of the Australian Dried Fruits Association, was formed. To the funds of this Committee, the various Dried Fruits Boards and the Australian Dried Fruits Association contribute. For many years, the Committee published a "Sunshine Cookery Book," and over 600,000 copies of this book were distributed in seven years.

Appeals to Housekeepers.

Striking newspaper advertisements are arranged for in all the main daily and women's papers in the capitals and main provincial towns, and a certain amount of wireless broadcasting has also been done. It is, however, with the retailer that the Committee concentrates the greater part of its publicity. Very attractive four-page brochures have been prepared, dealing with each type of dried fruit, and these are available to grocers for supply to their customers. Throughout the year, a series of window displays are arranged in all the capitals and in the larger centres of population, and it can be well understood that a bright window display of dried fruits, particularly one placed around a model vineyard, is very efficacious in increasing the sale of dried fruits.

Future Customers.

With a view of obtaining the interest of the young, the Committee prepared a colored school chart, which not only has a map of the irrigation areas on the Murray, but contains interesting statistics regarding production, and information on the food value of these fruits.

In connection with the schools, the Committee also has, travelling on a definite itinerary throughout the eastern States, two officers, whose duty it is not only to dress windows, but to give a film exhibition at each school to the order scholars. The purchase of two talkie machines for this purpose has added to the value of the work of these officers.

At the Sydney, Brisbane, Melbourne and Adelaide Royal Shows, the Committee stages a large display of all types of dried fruits, and samples are sold. This method has been found to be of great value in introducing dried fruits to people who had not previously realised the varied uses to which they could be put. Close contact is maintained with the bakery and pastrycooking trade, and exhibits are staged at the Pastrycooks' Exhibitions also.

Good Results Obtained.

Although the Committee's activities are limited by the comparatively small amount of money available, its value to the dried fruits industry cannot be over-stressed. It has proved conclusively that well-designed advertising creates a demand not previously existing for dried fruits. This was well shown by a special campaign lasting over a month, which the Committee conducted in 1936 for the disposal of Prunes, which were proving somewhat a drag on the market at this time.

Tangible evidence of the success which is attending the Committee's efforts is also shown by the fact that, since its inception, the Australian consumption of dried fruits has progressively increased, and last year the consumption reached over 19,000 tons, as compared with approximately 17,000 tons in 1936.

Dried Fruit in W.A.

May Meeting of State Board

AT the Western Australian Dried Fruits Board on May 9 those present were Messrs. Hastuck (Deputy Chairman), H. E. Fentrell, L. W. Ham and G. Edgecombe. The Chairman (Mr. A. H. Dickson) was absent at the Interstate Conference of Boards in Sydney.

Application Not Granted.

The recommendation of the Board that the application of the Swan Vignerons Co-op. Society Ltd. be approved by the Minister for Agriculture was read, also the reply of the Under Secretary for Agriculture, advising that for reasons given previously the Minister did not approve of the granting of the application.

It was decided that the Secretary should notify the Swan vignerons Co-op. Society Ltd. accordingly.

Consideration was given to a circular letter which had been despatched to all storekeepers, grocers, and bakers in New South Wales by that State's Board, and it was decided to defer a decision until after the Secretary had returned from the Interstate Conference, when enquiry might be made as to the amendment of existing legislation to make it illegal for receivers, as well as growers, to deal

in dried vine fruits other than through the registered packing sheds.

Rejection of Inferior Lexias.

Following an exchange of correspondence between the Chief State Supervising Officer, the Collector of Customs, the Government Viticulturist and the Inspector of the Department of Commerce, relative to a quantity of Lexias which had been rejected at the packing sheds as inferior and sold other than through a registered packing shed, the Secretary was instructed to communicate with those concerned, including the producer, to provide that the fruit should be sold for distillery purposes only.

Regulations.

The Secretary was requested to make enquiries, when at the Eastern States Conference, regarding a regulation to provide for the sale of dried fruit unfit for human consumption and for distillery purposes, through a registered packing shed only.

An inventor is said to have perfected a gramophone device which will give out in loud tones the speed at which a car is travelling. After passing 60 miles an hour the gramophone plays "Nearer My God to Thee."

DRIED FRUITS ACT.

Fines in N.S.W. for Illegal Traffic.

Recent investigations into illegal traffic in dried fruits by the special Inspector appointed by the New South Wales Dried Fruit Board, have disclosed further breaches of the Dried Fruits Act and Regulations.

The dried fruits regulations provide that dried Currants, Sultanas, Lexias, Prunes, Apricots, Peaches, Nectarines and Pears, shall be graded and packed at packing houses registered with the Board before sale. The regulations lay down a strict standard of grading and hygienic packing.

Further prosecutions at Coolamon, Wagga and Albury in respect of sales of dried fruits not packed and graded in accordance with the regulations were found necessary by the Board as a result of the Inspector's investigations.

John Paspalas, storekeeper, of Coolamon, was fined £2 with £1/9/- costs at the Coolamon Court of Petty Sessions on March 18, 1938.

At Wagga, on March 29 last, Messrs. David Copland & Co. and W. G. Huthwaite & Co. were each fined £4 with £1/9/- costs.

Mates Ltd., of Albury, were fined £2 with £1/9/- costs at the Albury Court of Petty Sessions on April 29 last.

In each instance the offence was the purchase of dried fruits not graded and packed in accordance with the regulations, and was a first offence.

Investigations into illegal traffic in dried fruits are being continued, and it is expected that proceedings against other offenders will be taken in the near future.

DRIED FRUIT SALES.

Good Quality of Sultanas Appreciated.

The Chairman of the Commonwealth Dried Fruits Export Control Board (Mr. W. C. F. Thomas) reports that to May 12, the following quantities of Australian Dried Fruits had been shipped to Great Britain: 21,932 tons of Sultanas, 7,345 tons Currants, and 396 tons of Lexias.

It will be observed that shipments to date approach 30,000 tons, due to the forward condition of the harvest, which is much earlier than usual.

Only a relatively small proportion of the shipments has yet reached the British market, but during the week ending May 12, sales amounting to 1,458 tons were reported. Of these, 1,317 tons of Sultanas averaged £39/15/- and 124 tons of Currants averaged £34/2/- per ton.

The quality of the Sultanas continues to be appreciated in overseas markets.

Further Sales to May 19.

The Commonwealth Dried Fruits Export Control Board report that during the week ending May 19, sales of Australian Dried Fruits in Great Britain amounted to 2,037 tons. Of these, 1,045 tons of Sultanas averaged £39/10/- per ton and 992 tons of Currants averaged £27/3/4 per ton.



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Dried Fruits in U.S.A.

Points from the Board's Annual Report

THE ANNUAL REPORT of the New South Wales Dried Fruits Board for the year ending June 30, 1937, has just been issued. It records that the production of dried Currants, Lexias and Sultanas was the largest since 1930, the 1937 figures being:—Currants, 1,029 tons; Sultanas, 5,037 tons; Lexias, 369 tons. Total, 6,435 tons. In 1936 the respective figures were:—Currants, 691 tons; Sultanas, 4,223 tons; Lexias, 371 tons. Total 5,285 tons.

Decline in Murrumbidgee Area.

The Board reports that the average annual production of dried Currants and Sultanas on the Murrumbidgee Irrigation Areas has shown a progressive decrease during recent years due to uprooting of vines. The seasonal conditions on this area are less favorable for the profitable production of Currants and Sultanas than the lower Murray River districts.

The principal dried vine fruits producing settlements in New South Wales are the Murrumbidgee, Coomealla, Curlwaa, Goodnight, Koraleigh and Pomona Irrigation Areas. In addition, small quantities of dried vine fruits are produced in the June. Albury and Euston districts.

Dried Tree Fruits.

Estimates of the production of dried tree fruits in New South Wales during the 1937 season are: Prunes, 2,340 tons; Apricots, 122 tons; Peaches, 127 tons; Nectarines, 5 tons, and Pears, 9 tons; a total of 2,603 tons.

Dried Prunes are produced in the Young district and on the Murrumbidgee Irrigation Areas. Small quantities are also produced in the Albury district. Dried Apricots, Pears, Peaches and Nectarines are produced on the Murrumbidgee and Curlwaa Irrigation Areas.

In New South Wales, the production of dried Apricots, Peaches, Nectarines and Pears fluctuates each season, and the tonnage dried is dependent on seasonal conditions and the prices obtainable at the canneries and fresh fruit markets.

The production of dried Apricots during the 1937 season on the Mur-

rumidgee Irrigation Areas was severely curtailed by frost and rain damage. However, due to a combination of favorable circumstances, the quantity of dried Prunes produced during the 1937 season was a record for the State. The quality of the fruit was of good average.

Twenty-five packing sheds were registered with the Board at June 30, 1937. Each certificate of registration is subject to the building and plant being of a standard satisfactory to the Board, the hygienic operation of the plant, and the maintenance of the buildings and plant in a satisfactory condition.

Inspection services at the packing-houses are undertaken by inspectors employed by the Commonwealth Department of Commerce responsible for the maintenance of the rigid standards of the grading and packing of fruit for export. In accordance with the practice of previous seasons, the Board has arranged to defray portion of the cost of the inspection services in the proportion that the Australian quota bears to the total pack. This is an economical arrangement mutually satisfactory to the Department of Commerce and the Board.

CONTENTS OF CIRCULAR TANKS.

The following method of computing the capacity of circular tanks will be of interest to orchardists. We quote from "Farmer and Settler," which gives the following rules.

Rule A.—Multiply the circumference by itself and the product by half the height.

Example: Circumference 20 ft., height 6 ft. 20 ft. x 20 ft. x 3 ft. = 1,200 gals. approximate capacity.

Rule B.—Multiply the diameter by itself and the product by five times the height.

Example: Diameter 6 ft., height 6 ft. 6 ft. x 6 ft. x 30 = 1,080 gals. approximate capacity.

Rule C.—Square the diameter in inches—multiply by height in inches—divide product by 353. Results will be approximate capacity in gallons.

Rule D.—Square the diameter in feet and multiply by 7,854, also by depth, then product by 6.25.

Example: 6 ft. x 6 ft. x .7854 x 6 ft. x 6.25, equals 1,050.29 gal.

Rule E.—Multiply the diameter into itself and deduct one-fifth from the product, then multiply the remainder by the depth and the result by 6½ will give contents in gallons.

Rule F.—Multiply the diameter by itself and multiply the product by 11-14. This, multiplied by the height, gives contents in cubic feet. Then multiply by 6½ to ascertain the number of gallons.

5,500,000 TANGERINE LEAVES.

In the last two years, a Russian scientist has been studying the relationship between the number of leaves and the number of fruit that will ripen later on Tangerine trees. This has necessitated the counting of about five and a half million leaves, and he has demonstrated that in the five months before the fruit ripens, it is possible to estimate how large a crop the grower may expect. According to the scientist, Prof. Akulov, this same ratio applies to any variety of citrus trees in any country, so now all that a grower has to do is count the leaves on his trees about Christmas time to decide if he can meet his overdraft at the bank.

ARE YOU

GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was **THE "MONKEY" GRUBBER.**

It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

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South Australian News and Notes



INCLUDING OFFICIAL NOTES AND REPORTS FROM THE SOUTH AUSTRALIAN FRUITGROWERS' & MARKET GARDENERS' ASSOCIATION.

The South Australian Fruitgrowers' & Market Gardeners' Association Incorp.

Meeting of Executive Committee

THE May executive meeting of the S.A. Fruitgrowers' and Market Gardeners' Association was held in the Board Room, 288a Rundle-street, Adelaide, on May 27, 1938.

Those present were:—Messrs. W. J. Bishop, H. N. Wicks, G. H. Schultz, H. H. Schultz, W. H. Ind, C. W. Giles, H. B. Robson, G. Jennings, I. R. Adams, N. T. Hobbs, J. B. Randell, E. Giles, F. Hughes, R. A. Cramond, R. Hunter, J. G. Potts, G. Strange, and Secretary.

Apologies: C. Ridley, L. J. and F. A. Wicks, J. Turner, and A. C. Gibson. The President, Mr. W. J. Bishop, presided.

Minutes of the April meeting, as sent out to each member, taken as read and confirmed.

Correspondence: (1) Royal Agricultural and Horticultural Society of S.A. relative to display of export Apples; (2) Careys' Gully Branch of the Agricultural Bureau of S.A., concerning Apple distribution; (3) Department of Agriculture, supplying figures of fruit held in cold storage at 30/4/38.

"That the correspondence be received," was carried on the motion of Messrs. H. N. Wicks and N. T. Hobbs.

Press Reports: The Secretary reported that the President, Mr. M. Vickers, and he, had interviewed the "News Editor" of the "Advertiser" concerning the publication of market reports. One member of the "Advertiser" staff investigated the matter, and would recommend the adoption of one accurate and comprehensive report from this Association. Owing to the absence of the editor, no finality had been reached, but should at an early date.

Society Report: The Secretary submitted the manager's report on the activities of the Fruitgrowers' and Market Gardeners' Society Ltd. The report showed that very satisfactory progress is being made.

Mr. C. W. Giles, supported by Mr. W. Ind, moved "That the report be received." Carried.

Sectional Reports.

Apple Section: Mr. J. B. Randell reported that the Federal Government had made available a grant to the States for the purpose of Apple propaganda. A meeting of Apple growers had been convened by the "S.A. F.M.A." to discuss the procedure to be adopted by S.A. There was poor response by members, however, a committee had been formed to go further into the matter.

The Secretary submitted a scheme, based on suggestions advanced by an Association member for the overcoming of glutted Apple markets. He

also re-read the suggestions submitted by the Agriculture Bureau Careys' Gully Branch.

The matter was discussed at length, and Mr. Strickland spoke on bi-products of Apples, using Tasmania as a basis. Mr. N. Wicks moved "That the matter be deferred until next meeting pending further information from Mr. Strickland." Seconded Mr. G. Schultz. Carried.

Celery Section: Mr. G. Strange reported that Celery was now in its glut period, and prospects were very favorable for a successful season. Jetting regulations had been eased somewhat, and the crate position was much easier. Mr. N. Hobbs moved: "That the Minister of Agriculture be thanked for his efforts regarding Celery exports." Seconded Mr. G. Strange. Carried.

Tomato Section: Mr. J. G. Potts reported that planting now was in progress. A meeting of the Committee had been held, and a new chairman appointed.

Citrus Section: Mr. N. T. Hobbs reported that a combined meeting of the Torrens Valley and Salisbury Citrus Associations had been held recently when matters appertaining to this season's exports were discussed.

Soft Fruits: Mr. F. Hughes reported that it was hoped that a meeting would be held shortly to deal with the cool storage problems.

The Secretary and Mr. E. Giles reported on the meeting held recently, when Mr. Henri de Coufer, of London, addressed Apple growers.

Finance: The Secretary submitted the financial statement and presented accounts for payment.

Mr. E. Giles moved: "That the accounts as presented be paid." Seconded Mr. G. Schultz. Carried.

It was resolved that the Secretary be sent to Melbourne as soon as possible to study the markets in that capital.

Correction

It was stated in the last edition of this paper that Mr. T. Playford had been appointed as Minister of Public Works and Repatriation—this should have read Minister of Crown Lands and Repatriation.

Following the extensive heavy rains during the middle of April, a prolonged dry spell has prevailed in South Australia, and further rain is now needed in most areas. Light showers during the latter part of May has relieved the position somewhat, but will not be any great material benefit.

FOR RADIANT HEALTH USE CELERY.

SCIENCE is concerning itself with our foods as never before. Even the vegetables have been analysed and are valued for the mineral salts and vitamins they contain. Gone are the days when a Cabbage was just a homely adjunct of roast beef or mutton. Nowadays Cabbages are among the aristocrats of the vegetable kingdom, because they contain calcium and sulphur, which purify the blood.

But good as they are, Cabbages are a much lower order of vegetable aristocrats than Celery. This succulent, juicy accompaniment for cheese and biscuits at the end of a meal has at last come into its own, and reigns queen of the kitchen, when the cook knows her business. For one thing, Celery is the only vegetable sold by its head. The others are bound up in bunches, sold by the dozen, pound, quarter, and so on. "A head of Celery, please," emphasises its importance.

But why this importance? Here are the facts that account for it. Celery has large quantities of two most necessary mineral salts: chlorine and sodium—and also of vitamin B.

"Celery acts on the nervous system," says that famous dietitian, Dr. B. G. Hauser, of Vienna. "It is strongly alkaline and is outstanding remedy for neuritis, sciatica, and rheumatism. It also benefits the stomach, liver, kidneys and brain. If eaten for two days raw, or in soup without salt, it clears the blood, tones up the liver, regulates the kidneys and relieves brain fog. Celery should be used freely with Lettuce, Green Peppers, Tomatoes and raw Apples."

But that is not all. The vital question of to-day among some women is: "What to eat to keep slim?" Here Celery comes to the front again. "Because of the chlorine it contains, Celery is a great eliminator of waste matter. Celery soup, made into a jelly with the vegetable gelatine Agar-Agar, and flavored with marmite and eaten twice a day for lunch and dinner, soon brings down excessive weight. So eat Celery and keep slim," says the same great authority on dietetics, Dr. B. G. Hauser, of Vienna.

Another food fact that ought to be better known is that the sodium in Celery prevents hardening of the arteries and catarrhal deafness. Celery tea is rich in sodium and should be used every day when this valuable food remedy is in season. The free use of raw Celery, Celery tea or soup, steamed or lightly stewed Celery, will prevent many tiresome ailments and cure those not too far advanced.

Think what these food facts may mean to you! Money spent on good, fresh Celery will be much more money saved on other things. Good food is the cheapest thing in the world. Good food means that radiant feeling which belongs only to perfect health. So to all we would say with science:

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"Eat South Australian Celery and be well."

Celery Tea.

Made from the root, the outside green stalks and the tops.

Wash all these carefully, cut into medium-sized pieces, cover well with cold water, and simmer for only half an hour. Then strain and season with Celery salt. Never use common salt with celery. Drink this tea hot or cold, instead of other liquids. Good for rheumatism, gout, nerves, stomach trouble, liver, kidneys, and brain fog.

Raw Celery Juice.

This has great curative properties and is easily made. Wash the root outer stalks and leaves. Put through a mincer with a basin underneath to catch the juice. Use the finest grinder. In cases of rheumatism drink this juice cold or very slightly warmed. This is a valuable remedy for all troubles helped by Celery.

Green Celery Tea.

For Rheumatism.

Take three good heads of Celery, wash very thoroughly in plenty of cold water and salt, then chop up very small and put into a jar or jug with a quart of water and a saltspoonful of salt, cover closely and steam for four hours. Strain carefully, mix with half the quantity of fresh milk, season with a little salt and pepper, and drink hot. This is an excellent recipe for relieving muscular rheumatism.

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Mr. Val Kerr, one of Victoria's leading orchardists, writes:—
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SOUTH AUSTRALIA (Continued)**The South Australian Fruit Marketing Association, Inc.****EXECUTIVE MEETING.**

Minutes of monthly meeting of members held at the Secretary's office, Brookman Buildings, Grenfell-street, Adelaide, on May 27, 1938.

Present: Messrs. J. S. Hammat, A. O. Petersen, R. O. Knappstein, M. G. Basey, A. G. Strickland, M. Vickers, A. R. Willmore, F. Rowley, H. N. Wicks, J. B. Randell, G. Quinn, F. F. Redden, R. H. A. Lewis, P. R. B. Searcy, H. J. Bishop, and the Secretary.

Apologies: Messrs. S. M. James, C. L. Winsor, F. B. James.

Chairman: Mr. J. B. Randell occupied the chair at the commencement of the meeting until the arrival of the President, Mr. H. J. Bishop.

Correspondence: Letters from the Australian Apple and Pear Export Council dated May 6, re trade with the East; May 11, re freight on Plums; May 26, enclosing copy of letter from Mr. E. Ross, London, re the necessity for a chart of counts employed in branding Australian Apples.

The question of "counts" and "sizes" was fully discussed, and the general opinion of members was that it would be advisable to keep to "sizes" if possible, but the matter was largely governed by the overseas buyers' requirements.

It was agreed to write the Apple and Pear Export Council and ask that they should obtain the charts used in Tasmania, New Zealand, South Africa, Argentina, so that these can be compared.

Apple Publicity Campaign: The sub-committee reported that they had met twice and had considered various suggestions, and they now recommended the following expenditure:—

- (1) That 2,000 copies of a circular (a draft of which had been kindly prepared by Mr. P. R. B. Searcy) should be distributed to all green-grocers coming to the East End Market, and also sent to green-grocers' shops in the country.

The circular asked for their co-operation in selling a good class of Apple and advised that supplies of a special paper bag would be supplied free of charge by the Association.

- (2) 25,000 bags to be obtained at a cost of £3/15/- per thousand, including printing for distribution as above.
- (3) Tramway Advertising: That posters be placed in 100 tramcars for a period of three months. The cost being 6d. per car per week, plus 10 per cent. and a small additional charge for mounting posters on strawboard.
- (4) Advertisements to be inserted in the "Advertiser" and the "Housewives' Journal," drawing the attention of the housewife to these Apple containers.

It was unanimously agreed that the sub-committee be authorised to incur the above expenditure.

Grading Regulations: Mr. A. G. Strickland stated that now the export season was over, his inspectors would be available for carrying out the work of enforcing the grading regulations, with the object of preventing, as far as possible, fruit being offered for sale which did not comply with the regulations.

Federal Bounty: It was resolved: "That the Secretary write to the Australian Apple and Pear Export Council and ask if they had been able to do anything further in regard to the Bounty for 1938 season. The grower members considered that the Bounty of 2½d. a case for 1937 was quite inadequate and they considered that it should be increased for 1938 season to at least 6d. per case."

Export Quota Basis Egyptian and Palestine Markets: Consideration of these matters referred from the January meeting was deferred till later.

Mid-Murray Notes

Autumn Approaches — Salt Troubles — Semi-Flood System — Lucerne Between Rows — De-Watering Agents — Salt-Tolerant Grains — Irrigation Commenced — Dehydration — Channel Construction.

By Our Correspondent.

THE VINES HAVE ALL taken on their Autumn tints, and a great many of them have already lost the majority of their leaves. This is particularly noticeable where the last special irrigation has not been given, and this means that no cover crop has been planted, which is quite the exception nowadays. Another cause of premature leaf fall is the incidence of salt trouble in patches of vines which need attention. Salt trouble may arise from two causes, either that of a high water table forcing the soluble salts to the surface and affecting the root system, or that of injudicious irrigations carried down two furrows so that the salts are pushed laterally towards the butts of the vines, where many of the feeding roots are situated.

The cause of whether they are salt affected patches or seepage can be arrived at by means of a post hole borer, using it to put down holes in places where a permanent high water table is suspected, and watched at intervals. In the event of salt troubles being present without the incidence, a dangerously high water table, a change in the method of irrigation practice should be adopted. The semi-flood system holds out the best solution in place of the old two furrow method. Irrigation water is conveyed down the rows between disc banks and beneath the vine rows so that the surface water pushes the salts down vertically instead of laterally.

I have seen a block improved beyond all recognition by the adoption of the semi-flood method of irrigation instead of the bad old two-furrow system. Among the many advantages of the semi-flood system is the shorter time required to irrigate a block, and this is a big consideration in every respect. Vines in perfect heart hold their leaves much longer than vines not in full production, or affected with salt troubles. If the premature leaf fall should be caused by a high water table there is only one thing to do—get rid of it. In the event of a drainage system being in existence the problem means putting down some extra drains. If there is no general drainage or local "get away," the matter is more difficult, and may need some individual experimenting in the use of growing plants.

Removing excess soil water by means of growing plants is becoming a popular practice, and has proved of great value in many instances. On a block recently visited a strip of Lucerne 4 ft. wide had been planted down the centre of each row, thus allowing a single horse cultivator to be used between the Lucerne and the vine row. As the Lucerne grows in the Summer time and during the irrigation period, when a high water table is aggravated, this method of using Lucerne as a dewatering agent has proved eminently satisfactory. The Lucerne is scythed, when necessary, and although this entails a good deal of hand work, it is useful as horse feed, thus serving a double purpose.

Mr. "Bill" Pannon has a patch of Gordos which were not entirely satisfactory, so he decided to plant a strip of Lucerne between each row, just as is done by using it as a dewatering agent. After allowing the Lucerne to grow for 3 or 4 years it was ploughed under. The vines treated in this way have improved to such an extent that a further portion of the block is to

be treated in a like manner. Another grower, who has followed this practice, is Mr. Mat. Sancho (a native of Jugo Slavia), who has planted a 4 ft. strip of Lucerne between every other row of about three acres of his land. The rows are 15 chains long and this length of run has been responsible for the top of row being over irrigated. By leaving a strip of land unplanted with Lucerne adjacent to the vines, provision is thereby made for cultivation with a single horse implement, and it has been found that if kept cut and not allowed to seed, the Lucerne will not spread.

The irrigation rows being 15 chains long, have been responsible for the necessity to take corrective measures to counteract the tendency for injurious salts to rise to the surface area. When the cut Lucerne is not required for stock purposes, it is thrown over into the clean cultivated rows and disced into the soil, thus improving it by means of the added organic matter. As Lucerne also contains a certain amount of nitrogen, the land will be further benefited in this respect.

The use of growing plants to act as dewatering agents can only be done to advantage on such soils as are suitable for the purpose and only where necessary.

In some localities excess water will develop at the lowest portion of a block and in others—notably that with a southern aspect—excess water will develop on the highest part of a block and nearest the delivery channel. In both these cases it would not be impossible to plant a strip of Lucerne at either the top or bottom end of the rows, to stop the trouble from becoming more acute.

Every irrigation settlement will sooner or later develop excess water troubles, and if the geographical position allows of a drainage scheme, whereby the drainage water can be gravitated to a common level, removal of excess water can be carried out satisfactorily. In the event, however, of an irrigation settlement having no natural outfall for excess water, there is some difficulty in developing a satisfactory drainage scheme. The only way it can be done is either to pump the excess water away or to remove it by the growing of plants suitable for the purpose, but this latter course must be followed before the concentration of injurious salts becomes too great to germinate the right kind of plant.

There are many acres of land in our low lift irrigation areas, which have become entirely unproductive owing to the trouble having gone too far, but there is no reason for further delaying a progressive policy by individual growers in tackling the problem of removing excess water by growing plants in such places as now constitute danger points.

A good deal of misconception exists in the minds of many growers regarding the possibility of removing salts from the soil by means of growing Barley or any other salt-tolerant plant, and it is not uncommon to hear the remark, "I'm going to plant Barley to take the salt out of my land. I'll cut it and feed it to my stock." Both Barley and Rye are salt tolerant plants, but it is erroneous to believe that large quantities of salt are being removed from the soil by growing them.

FRUIT TREES**A Quarter Million Quality Trees in Various Stages**

THE ONLY NURSERY IN SOUTH AUSTRALIA
— DEVOTED EXCLUSIVELY TO THE —
PRODUCTION OF QUALITY FRUIT TREES

Send for 1938 Illustrated Catalogue

H. N. WICKS

Balhannah Nurseries, Balhannah, S.A.

Colloidal Sulphur

Established by field trial and scientific tests as the major recent advance in the control of Fungous Diseases of Vines, Orchard Trees and Vegetables

HOWARD'S COLLOIDAL SULPHUR

is better and cheaper than competitive brands. Pamphlets, prices and details of free test offer from the manufacturers:—

R. G. Howard & Co., 27 GRENFELL ST. ADELAIDE

A great deal more good can be done by ploughing the crop under, which would materially improve the condition of the soil, and have the tendency to keep the salts down, that is, unless the water table is dangerously high. Salt cannot be removed from the soil to any practical degree by plants, but it can be kept down by ploughing into the soil a succession of cover crops.

With the exception of a few tons of fruit still in a semi-dried condition and in process of dehydration, all the vine fruits have been harvested. In a drying season such as we have just experienced, with its long succession of warm, sunny days, there seems to be no logical reason for any fruit to be even in a semi-dried state at present.

Lack of sufficient drying plant is the only reason for the late fruit, and this is a provision which should receive adequate consideration early in the season. A few consignments of Oranges have gone forward to the market, but it has been decided to delay further deliveries until they reach a better state of maturity. Although the Oranges have reached the standard of maturity set by the Government, they have not yet reached a full flavor, and I think the decision to await fuller maturity is a wise one.

The Renmark Irrigation Trust have notified growers that a third special irrigation will commence on Tuesday next, May 24. This irrigation will be availed of by citrus growers and those whose cover crops are languishing for the want of moisture. Although the irrigation is necessary for the two purposes just mentioned, it will materially interfere with the Trust's Winter work of concreting channels. Last year much main channelling was concreted, and it was hoped that more progress would be made this Winter, but the continued dry weather will necessitate a temporary halt during the progress of the irrigation. — "Nemo."

Rub your mirrors over with a damp cloth dipped in cigarette ash before polishing them in the usual way, and you'll keep them free from fly marks.

Coliban Water Shortage

Loans Sought By Fruitgrowers.

Premier to Approach Cabinet.

During May a deputation of fruit-growers from the Bendigo and Harcourt districts waited upon the State Premier, Mr. Dunstan, and reported losses through restrictions upon the use of water during the recent dry weather. That the storage capacity in the Coliban area was insufficient is admitted by the Government and the State Rivers and Water Supply Commission, and it is expected that the recent enforced restrictions will result in steps being taken to increase storage facilities.

The deputation of fruitgrowers was introduced by Dr. Shields and Mr. Lansell, M.L.C., and supported by Col. J. H. Lang, Col. W. E. James, and Mr. J. H. Ely, who pointed out that the losses approximated 300,000 cases of Apples and 51,000 cases of Pears, and that the shortage of water had effected a loss of about £120,000 to growers, whilst the Railways had lost freights worth approximately £1,500. This is the first time, declared Mr. Ely, that Harcourt fruitgrowers had ever asked any help from the State Government.

In reply, Mr. Dunstan agreed to put a proposal to the Cabinet, that loans to fruitgrowers and other producers who had suffered losses be made free of interest.

In this issue, Messrs. Joske and Burbridge write in protest against preference being given to Harcourt, or growers in any district. Their letter will be found in our "Letters to the Editor" page.

Not So Bad.

Bill thought his gas tank was getting low;

He struck a match and the tank let go.

Bill sailed four miles right through the air—

Four miles on a pint is pretty fair!

Merbein Research Station

Mildura, May 25.

A meeting of the Advisory Council of the Merbein Research Station was held yesterday at the Station, and was attended by the following members:—Messrs. D. C. Winterbottom (Chairman), L. W. Andrew (Waikerie), O. Weste (Renmark), W. Hayseman (Cardross), A. E. Cameron (Red Cliffs), J. Richardson (Woorenin), G. L. Miles (Woorenin), W. A. Grundy (Nyah), J. Gordon (Irymple), S. Taylor (Curlwaa), A. V. Lyon (Sec.); Messrs. A. Ingerson (Berri), and R. C. Polkinghorn attended by invitation as part-time officers interested in the work of the Station.

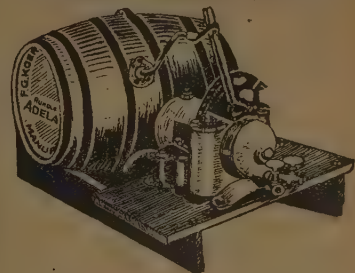
The Chairman welcomed the new members recently appointed on the Committee from Curlwaa, Nyah and Woorenin, saying that the irrigation settlements along the river are now in close touch with all the work of the Station, and have shown themselves particularly interested in the activities concerning drainage. Mr. A. V. Lyon (Officer in Charge) outlined the work in progress on drainage matters and other viticultural problems, and reported the resignation of Mr. J. A. Thomas, who is undertaking private practice elsewhere. Other appointments will be made shortly to bring the staff up to full capacity. Mr. Orton has been appointed chief assistant in place of Mr. Thomas, and is now a full-time officer of the C.S.I.R.

Special investigations in hand included those of dipping and drying of Sultanas, irrigated pastures, nitrogen effect on Sultanas, quality of Zante Currant. This latter problem has been foremost in the minds of most South Australian irrigationists in recent years, and the method of attack will now include the possibility of some minor soil deficiency occurring in the soil.

Mr. Orton addressed the meeting on his work on the problem of Sultana dipping and drying, and grub investigation, covering the last three seasons. In view of the importance of this work it was resolved to have the work published in pamphlet form and distributed to growers before next season's operations begin.

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when you purchase an
"Everlasting" Sprayer
No more corrosion or washer troubles.
Always an even high pressure.



Made in one solid gunmetal casting and supplied with 40 or 60 gal. cask or copper tank.
FRED G. KOERNER & LTD. CO.
275 Rundle Street, Adelaide

It was resolved that the full Committee meet twice yearly, in May and December, and that an Executive Committee be formed comprising Messrs. A. V. Lyon, D. C. Winterbottom, A. Lockhead, J. Cameron and Leaver to attend to matters arising in the interim. Mr. Lyon reported the growing interest being taken in drainage by most of the irrigation settlements, and those now being drained or have drainage in contemplation comprise Waikerie, Barmera, Berri, Renmark (S.A.), Mildura, Curlwaa (N.S.W.), Coomealla, Goodnight, Bungunyah, Nyah, Woorenin, Tresco.

On May 25 a field demonstration was held at the Research Farm of many types of tractors and implements. Every type of tractor and tractor implements were seen at work during the afternoon. According to every tractor maker, each one had special features not possessed by the other, and the persuasive salesman did good business. The demonstration was attended by growers covering an area of hundreds of miles.—"Nemo."



Yearling Almonds at the nursery of Mr. H. N. Wicks, Balhannah, S.A.

Motor Cars, Trucks, Tractors

Tractor Versus Horses

Costs and Rise.

In a paper read at a meeting of Heltown (S.A.) farmers recently, Mr. L. S. Duckmanton gave his experience of both horses and tractors and the value of each on the farm, together with some comparison between costs.

Costs.—From a point of view of costs, which is at all times a primary consideration, the tractor has a slight advantage over horses, insofar that on the small farm there is necessarily so much time that the horses have to be fed when they are not actually working. During April (part), May, and part of June I cultivated, twice, 100 acres of land, ploughed 25 acres, and then sowed and harrowed the 100

acres for the cost of £8/15/- for kerosene, £1/5/- for petrol, and £2/12/- for oil, making a total cost of £12/12/- with the tractor. To feed 10 horses for the same period (8 weeks) would need 9 tons of chaff at £2/10/- a ton, making the cost of horse feed £22/10/-. That is feeding on chaff alone, with the addition of crushed Oats; of course, the amount of chaff used would not be so great, but the cost of the crushed Oats would quite make up the difference.

Labor.—The labor attached to feeding a team of horses is greater than some people realise. There are so many handlings of the feed. It has to be cut with the binder, stooked,

carted to stack, unstacked and carted to chaffcutters, chaffed, fed to horses, and finally carted out of the stable, which totals seven times handling. For a team to do well it is also necessary for them to be groomed, and that also is 3 to 1 hour's work every morning. With the tractor the fuel or feed is simply pumped into the tank and when used is blown into the air. Of course, the tractor has to be cleaned periodically. This is a few hour's work also, but it is not an everyday job.

The tractor is a decided adjunct to the man on the small farm, as it allows him the time to do the hundred and one odd jobs that have to be done in the daily life of every farmer and still get his work done in good time. When he is working horses such jobs have to wait in lots of cases, except the very pressing ones, until the job in hand is completed. Then they have accumulated so much that it is a day or perhaps several days' work to get them out of the way.

Care.—There is one aspect of the position that is made very clear to the owner of a tractor, and that is abuse. There are often times with horses when they are overloaded, or worked in unfit condition—in some cases extremely so, otherwise there would be no need for such an organisation as the S.P.C.A. This is a condition that cannot be met with when tractors are working, because if the machine is not in perfect working order it will not work well for long, and when overloaded will soon "give up the ghost." If a farmer neglects to keep his tractor in good repair he is laying up trouble for himself, in that when the machine refuses to work any longer through neglect, the repair is much more costly than if attended to when the fault is first noticed.

Side Lines.—There is more scope for side lines on the small farm when one has not to think of feed for a team. There is always a certain amount of hay to be cut on any farm with tracks and roadways through the crop, which can be fed to stock other than horses. It does not need a great deal of hay to feed a few cows or sheep through the pastureless time of the year, and either cows or sheep repay the time and feed used in subsistence during those few months of the year.

Whereas a man may become careless and neglect a team of horses and get away with it for a time, carelessness with a tractor very quickly brings disaster. One soon learns to be on the alert at all times for signs of the wear which must from time to time take place in the machine which is working under a load all the time, and one attends to it before the wear in one part sets up trouble in some other part, making repairs double and sometimes much more costly.

The greatest disadvantage with a tractor is the old enemy, deterioration, and the inability to offset it with natural increase, as is possible in the case of horses. One cannot breed tractors, but with horses one can usually breed at least one foal a year and so keep the team young and efficient, beside after some years being able to sell one horse a year.

Louis: "How's your car running?"

Carl: "Not so good, I can't keep it throttled down."

Louis: "How's your wife?"

Carl: "Oh, she's about the same."

MOTOR POWER IN RUSSIA.

Latest reports from Moscow indicate how the U.S.S.R. automobile and mechanised agricultural industries are being developed in that country. For the first three months of this year, 19,881 automobiles were produced, 19,210 being trucks, the balance covering passenger cars. On this basis the U.S.S.R. automobile plants will have an output of nearly 80,000 motor trucks during 1938.

During the year the Commissariat of Agriculture will be supplied with 76,000 new tractors; 14,500 motor trucks, 54,000 combines, 1,250 electric threshing machines, and other agricultural machinery.

These figures show that Russia has overcome the teething troubles of her new engineering enterprises, which, when inaugurated on a big scale a few years back, looked like turning out a dire failure owing to the difficulty of training reliable artisans to operate the new plants, which were based on American mass production methods.

WORLD CONFERENCE OF GENERAL MOTORS EXECUTIVE

Australian Director to Attend.

Mr. L. J. Hartnett, managing director of General Motors-Holdens Ltd., accompanied by Mrs. Hartnett, will leave at the end of this month for New York, where he will attend a world conference of General Motors executives in July. He will then visit the United States and Canadian factories. Later he will travel to his home country, England, to inspect the works of the Vauxhall company, of which he is a director. Mr. Hartnett will tour the Continent and he expects to return to Australia at the end of November.

ONE IN THREE CARS OBSOLETE.

More Than Ten Years Old.

About 35 per cent. of motor trucks in Australia are ten years old or more, according to a study made by the Dunlop Rubber Co. recently. In the past 10 years 370,000 new cars have been sold in the Commonwealth, but as 550,000 had been registered, approximately 180,000 were more than that age. Up to the end of 1937 208,556 motor trucks, vans and buses were registered, of which 73,305 commercial vehicles were then over 10 years old.

Sales of motor vehicles in 1938 represented a value of approximately £94,000,000. Registration fees and petrol tax consumed £15,000,000 yearly, or about 16 per cent. of the present value of the vehicles.

OVERDOING IT.

A motorist was asked if he had tried a new atomiser which is said to halve petrol consumption.

"Rather," he replied. "It did all the makers claimed for it, and saved fifty per cent. of my petrol. I also bought a new carburettor which saved thirty per cent., got another brand of petrol which saved twenty per cent., and some special sparking plugs which saved another ten per cent."

"Then I took the car out for a test run and I'm dashed if the petrol tank didn't overflow before I'd gone five miles."

Quick Facts about—

1938 CHEV. UTILITIES

WE DON'T WANT to appear abrupt, but we believe busy truck men would like to know the highlights of 1938 "CHEVROLET" utilities.

Here they are:

12 cwt. and 15 cwt. capacities. 112" wheelbase. 85 h.p. high compression, Valve-in-head, 6-cylinder Engine. New Diaphragm Plate Spring Clutch for smoother, quicker response, more positive in action, and easier in operation. Redesigned Valves and Guides with greatly increased cooling area for faster dissipation of heat away from combustion chambers. Electroplated Cast Iron Pistons, Four-bearing Crankshaft, Full length Water Jackets, Ventilated Generator, perfect Lubrication. Improved Electrical System, including new starting mechanism with over-running Clutch and Automatic Throttle Advance for sure, quick-fire starts. Improved automatic Down-Draught Carburettor. Perfected Hydraulic extra-powerful Brakes. New Rear Spring Attachment to the rear axle housing for smoothness and stability. Easy-riding Springs maximum length. Chassis Frame of Box Girder Construction on the 12 cwt. capacity. Channel Steel Frame on the 15 cwt. capacity. Synchro-mesh Gears. Full Tool Kit. Holden all-steel Coupe front Utility Bodies, with Panel Vans. Every type of Body required available for individual service. All Bodies designed to give maximum loading space.

1938 "CHEVROLET" Utilities are now on display—inspect them to-day. Demonstration gladly arranged. Prices from £249. (Plus Tax).

CHEVROLET—Public Favourite No. 1.

PRESTON MOTORS PTY. LTD.

114 Franklin St., Melbourne, C.1. F3621.

Head Office:
104 Russell Street.
Melb. C.1., C9200



Canned Fruits News and Notes

Descriptive Labels

Gaining Favour in U.S.A.

The National Canners' Association of U.S.A. is strongly advocating the use of labels describing the contents of the can, instead of trade grades, and report that this form of label is finding increased favor with consumers, according to C. B. Larrabee, in "Better Fruit."

The chain stores welcome them, he says.

Descriptive labelling is now being used by a sufficiently large number of canners so that its advantages and disadvantages can be set against those of grade labelling. The consumer now has the opportunity to judge.

At the 1937 Convention of canners in Chicago, Judge Covington summarised the programme by saying, "The label should be the window of the can." The label should contain such a complete description of the contents of the can that the purchaser will know exactly what is inside.

At the Chicago Convention, there was presented an exhibit of descriptive labels. Even the most prejudiced observer is forced to admit that descriptive labelling as now being employed by the most progressive canners gives the consumer a far better idea of what is inside the can than she could possibly have under the old, haphazard system of labelling which often either gave no information at all or used the optimistic arts of pen and brush to be misleading and deceptive.

What more could the consumer want than is put on the labels used by the Oregon Fruit Products Company? Here, for instance, is the information contained on a label for Oregon canned fresh Prunes:—

- Fruit Quality—Good.
- Fruit Size—Medium.
- Flavor—Full Ripe.
- Sweetening—Unsweetened.
- How Canned—Whole.
- Net Contents—6 lbs. 6 ozs.
- Approved For—Table Use, Pies or Preserves.

This description, prominently displayed, gives the consumer about all the information she can demand, and certainly goes into far more detail than would be required by any grading system.

Some of the canners not only use descriptive labelling but propagandise for it. The Prune label, for instance, says:—

Descriptive Labelling.

Helps you shop intelligently—economically, know what's inside the can. Ask your grocer for our other descriptively labelled Oregon products. Comments, suggestions or complaints invited.

Simpler and less detailed are the labels used by the California Packing Corporation for Del Monte products. A sliced Pineapple can label carries this information:—

This Can Contains

- Del Monte Sliced Pineapple.
- Size of can No. 1½ Flat
- Contents 15 oz.

Slices in can 4 Heavy Syrup Heavy

With much less detail than the Oregon label, this gives the essential information.

Descriptive labelling does not depend upon words alone. In fact, illustrations play a large part in the canners' programme. Many labels depend almost entirely on illustrations to convey the story. It is the belief of the canners using this type of label that certain food products can best be described by pictures.

H. C. Baxter & Bro., of Brunswick, Maine, use pictures to show size. On a label for their sugar Peas this firm, in a side panel, pictures three sizes of Peas denoted "Small, Medium Small, Medium Large." An arrow points to the size contained in the can. This not only shows the consumer what size Pea she is buying, but also gives her a chance to compare the size with the other two available.

The size designation also is carried on the front and pack of the label, but the words "Medium Small" would mean comparatively little without the diagram.

The California Sanitary Company Ltd., packer of Masterpiece California Ripe Olives, devotes a part of its label to a picture of an olive under which is this caption: "This can contains about 46 olives of this size."

In addition, the label says: "Net weight of fruit, 9 oz.," and "Packed and sterilised under the supervision of and according to the regulations of the State of California Department of Public Health."

This is a particularly interesting exhibit because trade designation of olive sizes is more than slightly

reminiscent of the logic of Gilbert and Sullivan.

Libby, McNeil & Libby are, perhaps, the most succinct of the descriptive labellers. They give the consumer this information, taken from a can of figs: "Approximately eight to ten figs of uniform size packed in Heavy Syrup." The same formula is used on other products, as is shown by a label from a Bartlett Pear can: "Approximately eight to eleven halves of uniform size packed in Heavy Syrup."

To the consumer who objects that the label does not give her any idea of size, the answer, which admittedly may not be entirely satisfactory, is that if she is any judge of size she can look at the can, look at the label, and then determine about how large would be the eight or ten figs in the can.

CANNED PASSION FRUIT JUICE.

Growing Demand in U.S.A.

Fruit juice drinking is maintaining its popularity in America and producers are on the lookout for new lines to supply the enormous demand, which is to the benefit of the fruit industry. Now word comes that the Future Fruit Farmers of Hawaii has gone into production of canned Passionfruit juice. A farm of 28 acres at Wahiawa, on the island of Kauai, has been planted as a community project, and it is anticipated that there will develop a large trade in this product. Already samples have been sent to brokers in New York, and more orders have been lodged than can be filled in the next two years.

THE ENGINE IS THE HEART OF YOUR SPRAYING PLANT

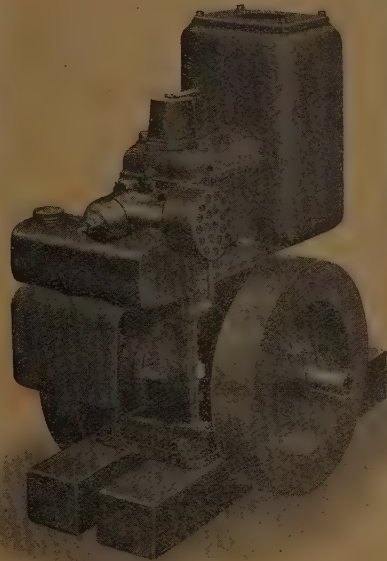
And No Plant is Better than the Engine That Drives It!

RONALDSON-TIPPETT PETROL ENGINES are well known for their ability to stay right on the job year after year. The latest design of Ronaldson-Tippett Roller-Bearing Vertical Petrol Engine embodies improvements which ensure still lower running cost and outstanding performance. In choosing a Spraying Plant the careful buyer will recognise the underlying quality of this power unit, which guarantees continued efficiency and lasting satisfaction. When Ronaldson-Tippett Petrol Engines are judged by materials and engineering workmanship—details unnoticed by the average eye—then their value becomes more apparent! Write now for particulars of the Spraying Plant most suited to your own particular requirements — there's a size and type for every orchard in the Ronaldson-Tippett range.

Type FN Spraying Plant



Any of these plants can be fitted with steel wheels or pneumatic tyres as required.



MADE IN AUSTRALIA by the LARGEST MANUFACTURERS . . OF ENGINES IN THE SOUTHERN HEMISPHERE . .

RONALDSON BROS. & TIPPETT Pty. Ltd., 700 Creswick Rd., Ballarat

Interstate Distributors:

- HORWOOD, BAGSHAW LTD., 34-38 Young St., Waterloo, N.S.W.
- ALFA-LAVAL SEPARATOR CO. PTY. LTD., 299 Sussex St., Sydney, N.S.W.
- AUSTRALIAN ESTATES CO. LTD., 100-108 Creek St., Brisbane, Queensland.
- ENGINEERING SUPPLY CO. OF AUST. PTY. LTD., Charlotte St., Brisbane, Queensland.

- IMPLEMENT COMPANY, 88 Grenfell St., Adelaide, S.A.
- WESTRALIAN FARMERS LTD., Wellington St., Perth, W.A.
- MCLEAN BROS. & RIGG LTD., 104 Murray St., Perth, W.A.

RONALDSON - TIPPETT

Canned Fruits Exports

The total exports of canned fruit for the current season, up to April 30, are announced by the Canned Fruits Control Board as follows. The figures represent case of 2 doz. 30 oz. tins or equivalent:—

Country.	Apricots.	Peaches.	Pears.	Fruit Salad.	Pine-apples.	Total.
U.K.	79,552	258,795	195,770	255	8,907	543,279
N.Z.	3,696	8,199	1,269	—	1,301	14,465
Canada	1,262	5,260	232	—	13,690	20,444
East	857	2,534	1,905	386	4	5,686
Misc.	382	574	718	28	58	1,760
Total	85,749	275,362	199,894	669	23,960	585,634

TRADE WITH EAST INDIES.

In the East Indies, potential markets for Australian canned fruits, a boycott against Japanese goods is being observed, according to Mr. E. R. R. Van Esveld upon his return from one of his periodical visits to the Island. He also stated that South Africa is taking a lot of Australia's trade in canned and other foods, and that the business recession in U.S.A. is affecting prices in the East Indies.

ANOTHER RECORD PACK.

Kyabram Packs 10,500,000 Cans.
An increase of nearly 2,000,000 cans this year is reported by the Kyabram Co-op. Cannery. Approximately 10½ million cans of Pears and Peaches have been processed. Besides these fruits, thousands of cases of Grapes and Peaches have been sent to the Australian market. Railway revenue for March shipments from Kyabram was £1,300 more than in the same month last year, reaching a record of more than £6,000.

An "All-Canned" Luncheon

An unusually interesting luncheon took place at Stratford-on-Avon last year. The menu consisted entirely of canned foods and drinks. Incidentally, it is believed that this is the first lunch of its kind to be staged in England. Cocktails, soups, fish, meats, vegetables, poultry, sweets, fruits, bread, cheese, butter, savories, wines and beers were served from tins.

The luncheon, which commemorated the opening of the latest and largest extension to the Stratford-on-Avon Produce Cannery Limited, was attended by Mr. R. De la Bere, M.P. for Evesham, a number of other Members of Parliament, Sir Edgar Jones, who has done so much to develop the canning industry, Dr. F. Hirst, head of the research station of canning at Campden, Mr. V. L. S. Charley, B.Sc., of the Long Ashton Research Station, Bristol, the Mayors from various local cities and towns, the leading growers and distributors and members of the medical profession.

Some idea of last year's output may be gauged from the fact that if the cans sold were put end to end they

would reach from Shakespeare's Tomb to Florence, in Italy, a distance, as the crow flies, of more than 825 miles. Most of the produce canned is grown in the immediate counties.

CANNED FRUIT RECORD.

3,030,928 Cases for 1938 Season.

Showing a rise of nearly 650,000 cases above the record pack of 1937, the canned fruit pack of 1938 reached the great total of 3,030,928 cases. This was announced in the report of the Canned Fruits Control Board, published on May 25.

Peaches comprised 1,790,742 cases; Pears, 860,104 cases, and Apricots, 380,082 cases. In each instance the pack was a record. The 1938 figures are up 400,000 cases of Peaches, 255,000 cases of Apricots, and 53,000 cases of Pears.

Early estimates placed the Australian total at 2,500,000 cases. The increase was due to exceptionally favorable weather in the growing and harvesting season, which also accounts for the pack being of unusually good quality.

Australasian and New Zealand Shippers

... wishing their fruit to be handled in the largest and most up-to-date premises in Covent Garden, should consign their APPLES, PEARS, PLUMS or ORANGES to:—

T. J. POUPART LTD. COVENT GARDEN LONDON, W.C.2.

Our world-wide reputation for efficient salesmanship will be still further enhanced by these structural advantages which we now offer to shippers—old and new.

At Southampton also a programme of re-building and modernization has been completed, placing at the disposal of our senders the most spacious warehouses in that port.

We would remind exporters desirous of shipping to Bristol, Liverpool, Hull and Glasgow that we are established at all these centres.

Special Department for the sale of Canned and Dried Fruits and Fruit Pulp at 46 Fish Street Hill, London, E.C.3.

REPRESENTATIVES

TASMANIA: MR. ERIC E. BURGESS, 119 Macquarie Street, Hobart.	NEW ZEALAND: CO-OPERATIVE FRUITGROWERS OF OTAGO LTD., P.O. Box 163, Dunedin, C.1.
VICTORIA: MR. C. S. ANDREW, 153 William Street, Melbourne.	NEW ZEALAND: OTAGO PROVINCIAL FRUITGROWERS' COUNCIL, P.O. Box 53, Dowling St., Dunedin.

NEW SOUTH WALES:
SUNNYSIDE ORCHARDS LTD., Hay Street, City Markets, Sydney.

1938 PACK OF PEARS.

860,104 CASES.

The Canned Fruits Control Board advises that the pack of canned Pears processed in Australia in the 1938 season totalled the equivalent of 860,104 cases each of 2 doz. 30 oz. cans. The classification is stated as:

Cases.	
Export Pack:	
Choice	33,309
Standard	577,854
Seconds	89,322
Domestic Pack:	
Standard	159,619
	860,104

of which 720,944 cases represent No 2½ size and 139,160 represent No. 1 size.

CANNED GRAPEFRUIT.

Leeton Cannery to Experiment.

The Leeton Cannery plans to experiment with canning Grapefruit and Grapefruit juice on a commercial scale for the London market. They recognise that competition against Californian canners will be strong, but the prospect still justifies the Company in exploring the possibilities for Australian Grapefruit on the British market. It is planned to process the fruit in August and September when it is at its best stage for canning. Leeton is to be commended upon its aggressive policy and results from the experiment will be awaited with interest.

LEETON CANNERY.

A suggestion for the establishment of a branch of the Leeton Cannery at Griffith has been held over. When the Board last met, no application was placed before it, but an endeavor is now being made to prepare a case for the Board's consideration at a later date.

PATENTS
GEORGE A. UREN
PATENT ATTORNEY
"HEATY HOUSE" 499 LITTLE COLLINS ST.
MELBOURNE.

THE MARKET GROWER

OFFICIAL ORGAN OF VEGETABLE GROWERS' SOCIETY OF VICTORIA. THE KOONDROOK & BARHAM TOMATO GROWERS ASSOCIATION AND THE SOUTH AUSTRALIAN FRUITGROWERS' AND MARKET GARDENERS' ASSOCIATION.

Vegetable Culture

REDUCTION OF WATER COSTS NEEDED —
METHODS OF WATERING IN VICTORIA.

SEEING that we are passing through a very dry period, it would be suitable if I touched on the question of water costs and methods of production under the sprinkler system of watering.

At the last monthly meeting of the Vegetable Growers' Society, the Secretary, Cr. C. C. A. George, reported that a deputation had recently waited on the Minister for Public Works, asking that the Act be so amended to allow the Board of Works to make a concession in the charges made to primary producers for excess water charges.

The societies who were represented were the Vegetable Growers' Association, the Southern Fruitgrowers' Association, the Cool Stores Association and the Flower Growers' Association. All the speakers stressed the need for reduction in their water costs, the fruitgrowers stating that with the amount of water required for each tree during a dry season, and the average yield for such a tree, at the price of fruit last season, they found that the trees had cost as much for water (without any other costs) as they received for the fruit, which was harvested.

The vegetable growers stated that at the end of last year many of their members had excess water bills to the Board of Works for the year amounting to hundreds of pounds, and find that instead of showing a profit for their year's labors they had been working for the Board of Works. This, it was pointed out to the Minister, was not a fair situation for any business house, and even the Electricity Commission gave concessions to those customers who use large quantities, and as the situation now stands the grower who has an excess water bill of £300 has to pay at the same rate per thousand galls. as any backyard grower who may have an excess account of £5 for the year.

The Minister agreed to bring the matter forward, and we are hoping that growers may now get some relief from a situation which is neither sound nor just, for no doubt it is to

the advantage of the community to see all classes of industry prosperous, and in the case of vegetable growers who are under the Metropolitan Board of Works system of pressure watering, it means they must use the water during dry periods or go out of business, for since the system of intense culture has come widely into operation, the size of the holding has been decreased, and now many Summer crops are planted on land which at that time of the season would otherwise not be suitable, knowing that the water is available.

Thus, where a grower under dry growing would need thirty-five acres, with the water available fifteen acres are quite sufficient to make a comfortable living off (if overhead costs are not too high), but here is where growers are caught, for with the intense competition from Southern European growers, prices are not bringing back any more than the cost of production, so growers find themselves unable to increase their holdings and revert back to dry growing, and the one thing (water) which makes a small holding possible is a great deal too high in price for the returns which can be obtained from the produce under these conditions; thus many hours' overtime are worked in the hope of struggling through, and women and children are called upon to perform tasks in the gardens which they should never have to do.

Now, Mr. Minister and Mr. Board of Works, it's up to you.

Now to touch on the

Methods of Watering
under pressure or the spray system. The most popular way of watering is to have sprays which are easily lifted and shifted to the different parts, usually with two sixty foot lengths of three-quarter inch hose attached, and the taps close enough together to allow of all the ground being reached with these two lengths of hose; if more than two lengths are used to each spray, it is too heavy to pull along, and makes for unnecessary strain on the hoses in shifting the sprays and hoses from one crop to

another. It is the best plan to roll the hoses up separately by laying the spray over on its side, allowing the water to run out, as the hose is rolled up. If the spray is left standing and the hose not uncoupled, all the water which is in the hose has to be carried making unnecessary weight in shifting.

Usually on crops which are drawing much moisture from the ground it is necessary to leave the spray in the one position for an hour—of course, in proportion to what moisture is being taken so the spray is left down to a period of fifteen minutes duration.

Crops such as Lettuce, which must be moist all the time, need a sprinkle every day if the weather is at all dry, and should not be watered during the extreme heat of the day.

Land which is being artificially watered must be kept loose on top to obtain the best results.

Where the crop is a good size, and the water, in falling, first hits the leaves, there is not the same need of cultivation, as the soil is not battered down to the same extent.

It is never wise to put the sprays on freshly ploughed and planted ground for the first three days after ploughing—the land has not set a new surface, and water falling on this type of land in any quantity quickly runs it together, and this is one thing the vegetable grower must always guard against, for once this has happened the crop never does as well, and it will take twice as much working to keep the land at all open.

Planting.

The month of June is not a good month in which to plant, the days are short, and usually growth is at its lowest ebb. It is much better to keep the land well worked up, and concentrate on next month, when crops will grow away much better; any time after the shortest day a few early Potatoes may be planted.

Much of the Potato seed is this year infected with grub and should be well pickled before planting. Many good pickles are available; the Department of Agriculture has a very efficient recipe. When Potato seed (in boxes) is put away for planting under a Pine tree or Cypress hedge, it will usually prevent them from being infected with grub; and with early planted Potatoes which dig before Christmas very good results are obtained from placing the small seed in cases or trays and allowing them to shoot well before planting.

Onion Pool.

A petition that a poll be taken to decide if this Onion Board and Pool shall continue has been presented to the Minister of Agriculture. More will be heard of this next month.

VICTORIAN VEGETABLES INTO N.S.W.

Prohibition Modified.

The Victorian Minister for Agriculture (Mr. Hogan) announced recently that the proclamation issued by New South Wales in 1926 which restricted Onions and Potatoes from Lucerne Flea infected areas in Victoria entering New South Wales has now been modified by arrangements with that State.

Up to date this has affected growers in the Warrnambool, Koroit and Port Fairy districts, but shipments from those districts would now be allowed into New South Wales.



"Plane" Brand Dusts

"Beauty" (Knapsack) Dusters
"Superior" (Rotary) Dusters

ARE MANUFACTURED BY

N. N. McLEAN Pty. Ltd.
395 Queen Street
MELBOURNE

Tomato Culture

Bacterial Canker is a Troublesome Disease.

Cultural Hints and Use of Disease-Free Seeds.

MANY TOMATO AREAS have suffered from outbreaks of Bacterial Canker (*Aplanobacter michiganense*) this season. Many growers fail to recognise the symptoms and have confused it with other diseases, such as Late Blight and Spotted Wilt.

The principal symptoms are a one-sided infection of the shoots—a yellowish discoloration which later becomes brown is seen inside the woody cylinder of the infected stems; yellowish to brownish streaks on the stems and leaf stalks which later crack open to form fissures or cankers.

The pith collapses in parts, and cavities appear which sometimes render the stems hollow for several inches. The internal browning and cavities are usually quite noticeable at the junction of the leaf-stalks with the stem, and are easily seen by snapping off a leaf at this point.

Bacterial germs from the stem cankers are washed on to the fruit in rainy weather and the snowy white spots formed are raised above the surface. These later crack open and become rough and brown.

The causal bacteria passes into the fruit by way of the sap conducting system into the developing seed. Fruit from affected plants may show no external signs, but the seed may be affected both internally and on the seed coat. The canker which is introduced by diseased seed is mainly spread in the seed bed. The seedlings may die but it is not generally apparent until later on. The soil in which the seedlings are planted becomes infected. The land should then be rejected for Tomato growing for three years.

Great care must be taken to purchase seeds from a reliable source. Seed should be extracted by fermentation with the pulp, without water, for at least three days. To disinfect seed—a solution of corrosive sublimate (1 oz. to 12½ pints of water) in which the seed has been immersed for ten minutes, and then washed thoroughly in clean water and dried in a warm place will kill germs on the seed coat, but will not rid the seed of internal infection. Infected crops should be removed and burnt, and all crop remains should also be burnt at the end of the season.

Change the site of the seed beds every year. Where land was once infested, do not use it again for Tomatoes for three years.

Protect Your Plants

FROM SNAILS, SLUGS, APHIS, AND ALL GARDEN PESTS WITH

PESTEND SUPERFINE

(Tobacco Dust)

Expert gardeners and growers recommend the use of PESTEND SUPERFINE—either for dusting, spraying, or for dressing the soil.

Used in a spray-duster or pressure-gun, PESTEND SUPERFINE adheres better, lasts longer, and costs less than ordinary spraying powders.

PESTEND SUPERFINE Tobacco Dust is non-poisonous to plants, inexpensive and easy to use. Try it out yourself!

Obtainable in 4 lb., 28 lb., and 1 cwt. bags at all produce stores, or direct from W. D. & H. O. Wills (Aust.) Limited.

5869-3-7

Victorian Orchardists and Cool Stores Association

Report of 20th Annual Conference

EXCESS BY COUNT — MOULD IN STORAGE — EXCESS WATER CHARGES — STORAGE OF SOFT FRUITS — PUBLICITY CAMPAIGN — INSURANCE — OTTAWA AGREEMENTS.

THE 20th annual conference of the Orchardists and Fruit Cool Stores Association of Victoria was held at the Town Hall, Echuca, on May 17, 1938. Mr. L. G. Cole (President), occupied the chair. Delegates were present from Ardmona, Blackburn, E. Burwood, Croydon, Diamond Creek, Doncaster E., Harcourt, Hastings, Mt. Waverley, Orchardists Cool Store (Doncaster), Ringwood, Somerville, Tyabb, Wantirna, several private stores, and also State and Federal Government officers.

Delegates were welcomed by the Mayor, Cr. Horne.

Interest on Loans.

In response to a request made by the Executive, the Director of Finance stated that the Acting Treasurer had approved of the maximum rate on Government loans to Cool Stores, being fixed at 4 per cent. for a further period of twelve months from July 1, 1938.

Resolved: "That the Director of Finance be thanked for this concession."

Sale of Large Fruit by Count.

The President said that a deputation had waited on the Minister for Agriculture when a very strong case had been put forward for the introduction of legislation enforcing the sale of large fruit to the public by count instead of by weight.

The Minister pointed out that it was now possible for fruiterers to adopt selling by count if they so desired, under existing legislation and further stated that he could not agree to take the request to the Cabinet, particularly as consumers' interests were not represented on the deputation.

Since that occasion the support of the Housewives' Association and other women's organisations had been enlisted, but so far Cabinet had not been persuaded to take any action in the matter.

Graph and Running Tables.

The Secretary presented the annual graph and tables, showing particulars of the electrical driving and oil engine driving of cool stores plants.

In the electrical table attention was drawn to the low cost per unit at Harcourt this year, due partly to a large proportion of night running and possibly in some measure to the change over to the Block Tariff late in the season. Several other stores were reported to be now under a different tariff from the Two Part Tariff, and it would be interesting next year to see if the new tariffs would result in savings generally, particularly in the smaller stores.

Thirteen stores submitted information for the graph. The average cost per case given capacity of these thirteen stores for all administrative and running costs were also given.

Affiliation Fees.

Resolved: That affiliation fees for 1938-39 be the same as for 1937-38, viz., Private Stores £1/1/-; Goulburn Valley and Interstate Stores, £2/2/-; Co-operative Stores at 3/6 per 1,000 c/s. capacity, with a maximum of £11/5/-.

Mould in Storage Cases.

A discussion took place regarding the prevalence of mould in storage cases, particularly in direct expansion stores. It appeared that this trouble was in evidence in many stores, in some cases attacking the fruit as well as the cases, and often resulting in

monetary loss. Mr. R. M. Finlay referred to information he had received from a commercial firm suggesting different ways of combating the mould; the best method apparently being to use a substance capable of penetrating the wood of cases and also cool chamber walls to a depth of about 1 in. At the Diamond Creek Cool Stores they had used a preparation satisfactory for the purpose of removing external moulds, but not capable of penetrating the wood. Other delegates reported having used various preparations of the latter type.

Resolved: "That Mr. Mitchell, of Imperial Chemical Industries, be asked to address the next quarterly meeting on the subject of the prevention of moulds in cases and cool stores."

Excess Water Charges.

Mr. F. Petty submitted a report received from Mr. F. Pyke on action taken by a deputation in an endeavour to secure reduced charges for excess water in the Metropolitan area. Mr. Pyke had represented the Association on the deputation, which had requested the Minister for Public Works for a reduced charge of 6d. per 1,000 gallons for excess water, or, alternatively, a charge of 6d. per 1,000 during Winter months to enable growers to fill storage dams with cheap water.

Resolved: "That this conference supports the Southern Fruitgrowers' Association in this matter, and directs the Executive to take whatever action it deems necessary in endeavouring to secure reduced charges for excess water in the Metropolitan area."

Official Opening.

The President welcomed Brigadier G. J. Rankin, M.P., to the conference, and invited him officially to open the conference.

Storage of Soft Fruits.

Mr. G. B. Tindale, B.Ag.Sc., addressed delegates on "Recent experiments into the storage of soft fruits," and with the experiments carried out regarding the cool storage of five

varieties of Peaches and ten varieties of Plums.

The value of these experiments was that not only did they indicate the varieties most suitable for export, but indicated that if certain temperatures were adhered to it would be possible to land Plums in England in a full state of lusciousness, suitable for the dessert market, a condition impossible in most cases under existing methods of shipment, most Australian shipments of Plums being suitable only for culinary purposes.

Put very briefly, the method of treatment for Plums was to store at a temperature of 32 deg. for four weeks and then to raise the temperature to 46 deg., which had the effect of lengthening the storage life of most varieties very considerably, it being possible to keep them up to an average of about 12 weeks, giving ample time for picking, packing, shipment and marketing, the fruit at the end of the period being in perfect condition as regards flavor and appearance. Several varieties of Peaches had responded favorably to somewhat similar treatment.

Publicity Campaign.

Mr. G. W. Brown, Acting Chairman of the Co-ordinating Publicity Committee last year, reported on the campaign to increase Australian consumption of Apples and Pears. The Federal Government had made available up to £5,000 on a pound for pound basis with the producing States. An amount of £4,711/13/7 has been made available by the States, therefore £9,423 became available to the Committee.

A comprehensive programme of publicity had been undertaken, State Committees set up, press advertisements appeared in selected daily newspapers and radio advertising secured. He presented a statement of contributions and expenditure and stated that on the whole the campaign had been valuable and an organisation for a continuance of publicity had been set up.

Australian Market Committee.

The President referred to this Committee and the Victorian State Committee formed to investigate marketing, collect statistics, and assist in the publicity for fresh fruit. It would be the work of the Victorian Committee to direct the spending of any sum made available, out of the Federal Government's grant of £2,000, to Victoria for special State work. Three members of the Executive represented the Association on the Victorian committee. A letter from the Victorian Fruit Marketing Association was read indicating that a meeting of the Victorian Committee would be held in the near future.

Election of Officers.

The election of officers for the ensuing year was then carried out, the following being appointed:—

President, Mr. F. Petty (Orchardists); Immediate Past President, Mr. L. G. Cole (Tyabb); Vice-Presidents, Mr. W. P. Mair (Tyabb); Mr. J. H. Lang (Harcourt); Representatives to Chamber of Agriculture, Mr. F. Petty; Representative to Empire Federation, Mr. F. Petty; Representative to Standards Association, Mr. E. Moore (Blackburn); Auditor, Mr. J. W. Barrett (Ringwood); Secretary and Treasurer, H. J. Noonan.

Storemen and Packers' Award.

Mr. Brown reported on the action taken by a committee comprising representatives of this Association and the Victorian Fruit Marketing Association in reaching an agreement with the Storemen and Packers' Union in regard to rates and conditions for the employment of packers of export fruit.

An agreement had been reached with the Union, based, as regards weekly employees, on a previous agreement entered into between the

(Continued on page 31.)

"CORK" DISEASES CURED!



Drought Spot — Internal Cork — Corky Pit — Corky Core and Crinkle have been proved to be caused by lack of Boron and have been definitely cured by broadcasting Borax on the ground around the trees.

External symptoms are not always visible. Fertilisation with Borax has increased the average crops of saleable fruit from trees attacked with disease, in one typical case from 3.6 to 10.6 boxes per tree in one year.

Are you getting a maximum crop? Why not benefit from the experience of others by spreading "Twenty Mule Team" Brand Borax around trees either immediately after blossoming or in Autumn. Approximate quantities: 46 lbs. to the acre.

Use "Twenty Mule Team" Brand Borax Guaranteed 99.5 to 100 per cent. purity.

Write for full particulars to your nearest agent.

20 MULE TEAM BRAND BORAX

AUSTRALASIAN AGENTS

Potter & Birks Pty. Ltd., Grosvenor House, Sydney, N.S.W.

C. A. Hendry, 81 St. George's Terrace, Perth.

L. M. Macdonald, Hayward Bldgs., Charles St., Adelaide.

W. H. MacLennan Pty. Ltd., Henty House, Melbourne, C.I.

H. M. Russell & Co. Pty. Ltd., Eagle & Charlotte Sts., Brisbane.

Short & Co., Auckland, C.I.

Swift & Co. Pty. Ltd., 26 Clarence Street, Sydney.

BORAX CONSOLIDATED Ltd., Regis House, King William St., London, E.C.4.

Export & Commercial News

New Zealand Notes

EXPORT AND LOCAL MARKETS

(By Our Correspondent.)

THE export season closed on May 23, with the receipt of about 9,000 cases from the Hawkes Bay district, where picking has been delayed owing to floods and the late coloring of varieties, such as Dougherty. The New Zealand total has been slightly over 1½ million boxes. The figures are not yet available of the quantities shipped to the respective markets, but it can be taken for granted that the United Kingdom quota of slightly over a million has been filled, and the balance distributed over North and South America, the Continent and Scandinavian countries.

Record figures were established in Hawkes Bay, but Nelson were 20,000 cases short of their previous best in 1934. It is interesting to study the variation in variety totals. The actual figures of each variety are not yet available, but from general information it would seem that as compared with 1934 there has been a big increase in Cox Orange Pippin and Granny Smith, with a decrease in some of the lesser known varieties. It can be expected that the quantities exported of these two varieties will increase over the next five years owing to the working over the large number of trees a few years ago, when Granny Smith and Cox Orange Pippin were bringing exceptionally high prices.

The premium for Cox Orange Pippin seems to have disappeared on this year's English returns, whether this is because of poor condition or a full supply on the market, will not be determined until information comes to hand from the London market. At one time it was considered that New Zealand could increase shipments of Cox Orange Pippin without any fear of overloading the market, but on this season's results that opinion is open to question. Recent London markets show Cox Orange Pippin on a par with Jonathan, whereas Granny Smith are 2/- to 3/- higher.

It is very pleasing to everyone concerned that the London market has held such a strong tone. The prices will not show any great profit to shippers, in fact as far as New Zealand is concerned they are under guarantee level, but there is a steadiness in the market which is very pleasing. It is impossible to forecast the trend of the market until some reliable information is available as to the effect of the English frosts on Strawberries and stone fruit.

Local Markets: Our paragraph in the last issue dealing with the local markets, and particularly our estimate of the Government's possible liability, has resulted in a certain amount of publicity throughout the New Zealand press. Our contention of a loss of 2/- per case to the Government has been supported by members of the fruit trade, but the Director of Internal Marketing, when consulted by the press, expressed the opinion that the correspondent to the "Fruit World" was very pessimistic. An investigation of all the known facts does not cause us to alter our opinion. Probably 50 per cent. of the fruit available for the New Zealand markets has already been sold at prices which show a greater liability than 2/- per case. So that even allowing for an increase in price over the cool storage season, the most optimistic cannot expect this increase to be sufficient to reduce the loss already

incurred below a seasonal average of 2/-.

Cool storage holdings are not exceptionally heavy, in fact, it is doubtful whether the total quantity in cool store this year is equivalent to the quantities held in 1937, which was a short crop year.

The Government advertising campaign is being continued, and we think this decision wise as the advertising should help to clear the markets of the orchard held fruit, and so give a longer season to the fruit ex cool store. Much will depend on quality, there are heavy quantities of Sturmers which were too large to export, held in temporary cool store, and already there are distinct signs of bitter pit developing. The abnormal rains throughout the picking season probably caused this excessive growth in the Sturmer. There is every indication that the bulk of cool storage stocks will have to be cleared early. Those growers holding good keeping fruit will probably do very well in late October and November, but there is available only a limited quantity of this fruit, most of which will come from the Hawkes Bay area.

Thinking growers are showing some concern regarding the future marketing within the country. There is a suggestion abroad that if the Government's liability on the past season's guarantee should be as heavy as is at present anticipated, there will be a suggestion from the Government to take over the whole of the fruit at a certain fixed price, the marketing to be the concern of the Government and not the grower. This is in line with the Government's policy of the Socialisation of Production, Distribution and Exchange. It would be perfectly simple for a Government with unlimited finance to purchase the whole of the production of an industry such as fruit, but the distribution of this perishable article would mean the creation of an organisation which would be so expensive that any advantage gained in distribution would be more than absorbed by the high overhead costs necessary to run such an organisation. The same position faces the industry in trying to handle distribution on a co-operative basis. The low value of fruit per package with about 50 per cent. of the realisations being absorbed by marketing costs, almost prohibits a complete marketing organisation. We are of the opinion that individual effort, possibly governed by some form of regulation, is the only economic system of handling fruit marketing in a country like New Zealand, where 50 per cent. of the consumers live outside the main cities. Distribution among a scattered population is very expensive.

Citrus: The first shipments of Australian Navels will reach New Zealand about mid-June, and from then on regular and increasing quantities are likely to be absorbed. The early shipments are coming from New South Wales, but later on South Australia and Victoria should be prominently in the picture. The cheapness of Apples will restrict the demand for Oranges, good Delicious were noticed in a retail shop recently at 10 lbs. for 1/-, or equivalent to 4/- a bushel box retail. The good shopper is more likely to be attracted by 35 Apples for 1/-, compared with five Oranges for the same money. All the same a certain proportion of the public will buy Oranges irrespective of the price.

Apple & Pear Exports, 1938

THE EXPORTS of fresh Apples and Pears from Australia, for the four months, January 1 to April 30, 1938, together with comparative figures in respect of 1937, are summarised in the following tables received by courtesy of the Dept. of Commerce.

Apple Exports—January to April.

Exporting States.	To the U.K. Cases.	To the Continent. Cases.	Other Destinations. Cases.	Total 1938. Cases.	Total 1937. Cases.
N.S.W.	56,617	1,391	11,153	69,161	86,956
Victoria	410,829	32,569	5,315	448,713	617,307
Queensland . . .	20,509	—	13,838	34,347	24,358
S. Australia . . .	391,657	161,376	13,221	566,254	241,565
W. Australia . .	198,334	147,832	27,373	373,539	543,609
Tasmania	1,931,408	153,211	21,195	2,105,814	2,009,516
Total, to April 30, 1938	3,009,354	496,379	92,095	3,597,828	—
Total, to April 30, 1937	2,921,525	491,020	110,766	—	3,523,311

The exports for the first four months of the present year are 74,517 cases in excess of those for the corresponding period of 1937, shipments to the United Kingdom having increased by 87,829 cases, to the Continent by 5,359 cases, whilst exports to other destinations show a decline of 18,671 cases.

A feature of the present season is the greater volume of exports in the earlier months. The quantities shipped during February and March exceeded those for the same two months of 1937, by more than 230,000 cases, whilst exports during April, 1938, were approximately 155,000 cases less than April, 1937. The comparative monthly figures are:—

	1938. Cases.	1937. Cases.
January	1,054	1,422
February	200,251	167,042
March	1,768,790	1,571,615
April	1,627,733	1,783,232

The exports of Pears continue to show a decline in comparison with 1937.

To the end of April the reduction in total shipments of 165,024 cases is accounted for by a fall of 167,972 cases to the United Kingdom, 4,623 cases to other destinations and an increase of 7,571 cases to Continental ports.

The quantities exported during each month are given, hereunder, from which it will be seen that a marked decline occurred in the months of February and April, to the extent of approximately 65,000 cases in the former and 98,000 cases in the latter.

Exporting States.	To the U.K. Cases.	To the Continent. Cases.	Other Destinations. Cases.	Total 1938. Cases.	Total 1937. Cases.
N.S.W.	15,453	—	8,817	24,270	27,246
Victoria	269,620	9,040	3,867	282,527	373,879
Queensland . . .	—	—	144	144	—
S. Australia . . .	44,211	—	1,193	45,404	50,748
W. Australia . .	18,001	8,122	1,270	27,393	31,083
Tasmania	119,178	—	184	119,362	181,163
Total, 1938 . . .	466,463	17,162	15,475	499,100	—
Total, 1937 . . .	634,435	9,591	20,098	—	664,124

ESTABLISHED 1900

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Personal Attention given to All Consignments.

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Mr. W. Pitts (Overseas and Interstate Export Co.), 20 Market St., Sydney, New South Wales. (Sole Agent for:—New South Wales, Queensland, South Australia.)

Murdoch Bros. Pty. Ltd., Market Place, Hobart, Tasmania.

Cables: "Botanizing, London."

Publicity in Britain

Fruit Display at Australia House.

A report received from Mr. A. E. Hyland, Director of Trade Publicity in England, dated May 2, 1938, stated that the 1938 Apple and Pear

season was opened by Sir Earle Page, Minister for Commerce, at Australia House, London. Other speakers were Hon. S. M. Bruce, High Commissioner, and Mr. G. T. Clark, Acting President of the National Federation of Fruit and Potato Trades Association Ltd. The audience comprised representatives of importers, wholesalers,

brokers and buyers of Australian fruits.

The press was strongly represented and gave prominent space to the occasion. The fruit displayed, which was selected by Dr. Harrison, Fruit Officer, was of good quality and represented all varieties of Apples and Pears.

APPLES AND PEARS IN U.K.

Good Prices in London :: Problems at Hull.

The Dept. of Commerce has advised the Australian Apple and Pear Council of the following cable:

"Fruit week ending May 21. Apple market hardened by 6d. case most varieties. C.O.P. good condition and quality scarce, few to 17/-; Sturmer, Scarlet and French Crab 9/-, 11/-. Arrivals during week, London, included Albionstar, Opawa, Orama, Clancolquhon fruit mostly satisfactory. "Esperance Bay," Southampton Pears many forward. Pear market, London, weakened little beginning week, but now recovered full strength.

Prospects bright both Pears, Apples next week London, but over 100,000 cases Apples due Hull, causing some apprehension to trade which making plans spread distribution over following two weeks when small supplies that port."



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Code: "ABC," 4th and 5th Editions.

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J. DAVIS PTY. LTD., Fruit Merchants

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One Trial Invited.

Best Prices obtained.

Prompt Advice and Payment.

Telephone, F 3232.

Bankers: The National Bank of Australasia, 271 Collins Street, Melbourne.

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Postal Address: G.P.O. Box 555D. Telephone: F 6341.

Codes: Bentley's A.B.O., 5th Edition.

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Selected Agents for all Growers' Organisations Throughout the Commonwealth.
Wholesale Fruit Merchants — Licensed Commission Agents — Importers and Exporters.

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Having carried on a successful business for over half a century, our name stands high in the Wholesale Fruit Trade of Australia. Our spacious premises at Melbourne Wholesale Fruit Market are admirably adapted for the conduct of our large business, and growers are assured that our best efforts are always at their disposal.

Bankers: Commercial Banking Co. of Sydney, Melbourne Branch. Fidelity Bond Guaranteed by I.O.A. Insurance Co.

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FRUIT MERCHANTS
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REGULAR SUPPLIES OF
GOOD FRUIT, WELL PACKED
AND GRADED,
BRING THE BEST RESULTS.

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Prompt Returns and Sales Notes Daily.
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WHOLESALE FRUIT MERCHANT
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Wholesale Fruit Merchants,
20 Wholesale Fruit Market, Melb.
CONSIGNMENTS OF FRUIT AND
VEGETABLES SOLICITED.
Tel.: F1023; Private: JW2528.
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Market Branch.

T. Stott & Sons

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CONSIGNMENTS SOLICITED.

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Cheques Sent Promptly.

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Growers can be assured of receiving
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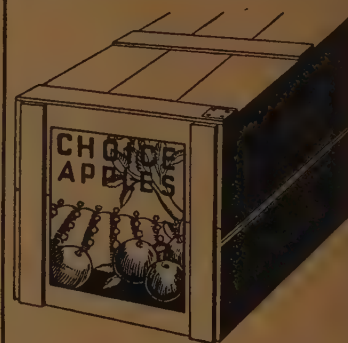
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Value and Prompt Returns.
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Phone: F 5834.



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Are now paying a Bonus
of 10% on all Commis-
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clients of the Fruit &
Vegetable Section for
year ending Sept., 1935

Send Your Consignments

TO US

MELBOURNE & SYDNEY.

Victorian Cool Stores Conference

(Continued from page 28.)

Union and S. J. Perry & Co., and, as regards pieceworkers, on the rates for this class of work general in Victorian packing sheds. Mr. Brown read through the agreement. Mr. K. Weeding of S. J. Perry & Co., explained that his company had been forced into an agreement with the Union owing to labor difficulties they had experienced over the past two or three years.

Mr. Weeding's Films.

Mr. K. Weeding showed films taken during his recent trip abroad. The first film showed scenes in and around Covent Garden market and Spitalfields market and indicated more forcefully than could be done by the spoken word the immensity of the business conducted in these markets and the strength of the competition met with by our fruit from practically every country in the world who in their season supplied London with every conceivable variety of fresh fruit.

Address on Insurance.

Mr. H. Foreman, of the Union Assurance Society Ltd., addressed the conference on the subject of insurance. He said that if the right steps were taken it was possible to insure anything anywhere. After some general remarks he dealt with the insurance of fruit in cool stores under the schemes whereby the Directors of co-operative stores assumed the responsibility of insuring shareholders' fruit. He gave as an instance the case of Harcourt stores where the directors were covered against every possible loss, provided they insured everything up to the full market value.

For cool stores he recommended one policy covering the building and plant, one policy covering fruit and packing, and one policy covering consequential loss, that is, loss sustained through the earning capacity of a store ceasing after a fire during the period necessary to replace or repair loss. The adoption of this system would be a guarantee against any emergency.

Crop Regulation.

Mr. F. Petty read to conference details of a proposal put forward by Mr. F. Pyke for the regulation of crops in glut years. The proposals, put briefly, were that an Australian-wide committee be given power to assess crops showing early in the year and where an excess crop was apparent to enforce the stripping of all fruit from a percentage of each grower's trees. The Committee to be financed by a 1d. per case levy on all fruit sold, which would also be used as a hail compensation fund. Some discussion ensued, but it was felt that no action could be taken.

Ottawa Agreement.

Mr. Brown dealt with the Ottawa Agreement of 1932 and the discussions on the Anglo-American Agreement at present under consideration. Under the 1932 Agreement a duty of 4/6 per cwt. was imposed on foreign fruit entering England, and it was essential to our industry that this duty be not reduced.

Officers of the Department of Commerce had evolved a scheme for the protection of the fruit industry that would actually be better than Ottawa.

He was not at liberty to disclose details of the proposals put forward, but assured conference that if adopted they would result in a stronger position for our export fruit in England, with a more stable market, and eventually the possibility of a slightly increased outlet. There was a danger, however, that the fresh fruit and canned fruit industries would be sacrificed to the advantage of other interests when the Anglo-American Agreement was finalised. He feared

that the Australian Government may weaken under pressure. It was our immediate duty to protect our interests to the best of our ability. It was

Resolved: "That this conference most strongly urges upon the Federal Government the need for protecting the position of the fresh fruit exporting industry on the British market, and trusts that a position at least as favorable as that obtained at Ottawa in 1932 will be maintained."

A copy of this resolution to be forwarded to the Prime Minister, Brigadier Rankin, and all Federal Members representing fruitgrowing areas.

COLD STORAGE CRITICISED.

Better Quality Fruit Wanted.

Cold storage is not a cure-all for fruit marketing, said a speaker to fruitgrowers in N.S.W. recently. It will not remove blemishes or cure fruit that had been put into store in an over-mature condition. Giving the public poor quality fruit has a bad effect. He quoted one instance in which some Sturmer Apples had been held on the trees, some in ordinary storage and some in cool store from April to December, and submitted to the public in relative poor condition.

While cool storage is of great value, he said, and ordinarily improves the flavor, there were, nevertheless, limitations to its utility and as inefficient storage or distribution reflects upon its popularity with the public, some control is necessary in respect of the period in which certain varieties should be marketed.

Criticism of New Sydney Markets : Fruit Agents Protest

Dissatisfaction with the present control of the Sydney Municipal Markets was recently expressed by members of the Chamber of Fruit and Vegetable Industries who request a Royal Commission of enquiry into market conditions.

The Lord Mayor, Alderman Nock, stated that the management of the markets would be more satisfactory in the hands of the City Council than in any other, and pointed to instances in which a change of management had not been satisfactory. The Council was willing to consider any improvement seriously suggested by the trade or the public.

Approximately 100 agents attended a meeting on May 12 when charges of mismanagement were made by speakers who desired a Market Trust with responsibility for the management of the markets. It was suggested that the management should be vested in two executive bodies, one for fruit and one for vegetables.

The fruit business in the Sydney Municipal Markets represents a value of £3,000,000 per year, it is stated. The matter of the complaints made is being considered by the City Council.

The view is held in many quarters that the new markets appear to benefit the vegetable trade more than the legitimate fruit trade.

LONDON FRUIT PRICES.

Major H. Dakin advises having received on May 30 a cable from his principals in London, Messrs. Geo. Monro Ltd., stating as follows:—

"Esperance Bay," "Albion Star," "Orama" Apples generally sound condition, trade firm: Cleos, 8/6 to 10/6; Jons., Sturmers, French Crabs, 9/- to 11/-; Pearmaines, 9/6 to 10/6; Tasmas, Geeveston, Kings, 9/- to 10/-; Afr., 10/- to 11/-; Del., 9/- to 9/6; Coxes, 10/- to 16/-; Granny Smiths, 11/- to 13/-; Sydney Coxes, "Orama," 15/- to 18/-.

"Orama" Pears, good condition, trade firmer, cases: Comite, 18/- to 20/-; Nelis, 18/- to 15/-; Jos., 15/- to 16/-; Boscs, 18/- to 14/-.

VICTORIA'S EXPORTS.

For the week ending May 7, two shipments were made. "Mooltan" took 8,303 cases Apples and "Jervis Bay" 10,530 cases Apples and 9,047 cases of Pears. Up to May 7, rejects have been 20,004 cases of Apples and 3,233 cases of Pears.

During the week ending May 7, 8,534 half bushel cases and 305 packages of cartons of Plums were shipped.

European distributions were represented by 17,008 cases of Apples to Antwerp, 10,697 cases of Apples to Rotterdam, besides 4,798 cases of Apples and 9,040 cases of Pears to Hamburg.



Licensed under Farm Produce Agents Act.

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ESTABLISHED 1894

Fruit Commission Agent

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HIGHEST MARKET PRICES

PROMPT RETURNS

RELIABLE ADVICE.

Registered Address for Telegrams and Cables: "CHILTONS."

References:—Bank of N.S.W., Haymarket, Sydney, and Growers throughout Australia.

CITY FRUIT MARKETS, SYDNEY.

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References: Bank of New South Wales. Shipping Numbers on Application.

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Licensed Farm Produce Agents.

8 City Fruit Markets, Sydney.

Our Motto—Quick Sales and Prompt Settlements.

Forwarding Numbers:

Tasmania, Victoria, S. Australia, No. 52.

Queensland, Northern Rivers, No. 12.

Tasmanian Apples in Europe

Markets Can be Extended

A RECENT visit to the Continent is reported by Mr. T. J. McKinley in a letter from London in which he reviewed his visit to Italy, Switzerland and France. Apart from his graphic description of what he saw in the way of scenery, he states that he saw little chance for Tasmanian Apples in Italy at present, as the Italians grow much fruit themselves where every inch of productive land is utilized. Peaches and Cherries are extensively grown in irrigated land. Should Italian fruit suffer from the adverse weather that

practically the whole of Europe has experienced, Tasmanian Apples into Britain should benefit.

He saw lots of fruit in Switzerland but it was mostly imported from America, red varieties and not of the best quality. He considers that there is a market for good Apples in Switzerland, provided that shipping and freight problems can be overcome.

In France, he states, the Australian Trade Representative, Mr. C. H. Voss told him that there is a demand for Tasmanian Apples and Pears in spite of restriction of imports, Mr.

Voss believes that he could have sold 100,000 cases of Tasmanian Apples if such had been available last season. At present France is consuming large quantities of American Apples, but that Tasmanian flavor is being appreciated.

As to the British market, Mr. McKinley stated that Tasmanian Apples had landed in fairly good condition. Ribstons and Cox's were not opening up well. He believes that Australian and Tasmanian Apples will be in good demand provided that regularity of shipments obviate a glut in any one week. He concludes with a pat on the back for the improved packing over that of former years.

VICTORIAN FRUIT EXPORTS.

Packing and Wrapping Plums.

A REPORT just received by the Victorian Department of Agriculture from Mr. S. R. McColl, Commercial Officer of the Agent-General's Office in London, gives particulars of the outturn of the "Strathnaver" shipment from Melbourne on February 8 last. The shipment comprised 1,183 bushel cases Pears, 8,524 half-bushel cases and 305 7-lb. punnets Plums.

Of the Pears, comprising Howells, Packhams and Doy. du Bossuch, all arrived in sound condition and of good quality. Prices reported were:—Howells, 9/-, 10/- and 11/-; Packhams, 11/- to 14/-; and Bossuch, 9/6 and 10/-.

Plums which consisted chiefly of Grand Duke and President, with a quantity of Coe's Golden Drop, Pickering, Blue Superb, Wickson and Reine Claude de Bavay, arrived in firm condition with a few exceptions of bruise.

Packing of Plums.

Since three different types of cases were used, viz., long Half Bushel, Australian Half Bushel, and 7 lb. punnets, it is interesting to note Mr. McColl's comments. He believes that the case is of secondary importance to the quality of the fruit. Merchants prefer the Australian half box, which contains more fruit than the long half bushel case. He suggests that growers should stencil the net weight of the fruit on the case when packed, and not the gross weight, as at present done. Well-packed and attractive looking samples bring most attention. He questions if punnet packing is worth the added cost.

Wrapping.

There appears to be little difference in condition or appearance between wrapped and unwrapped Plums, except in the case of large varieties. He suggests the packing of large Plums in the South African tray package, but it does not seem necessary to wrap the smaller varieties.

He concludes his report by saying that growers using corrugated boards give better protection than do those using only a paper lining in the cases. He suggests the general use of corrugated lining.

MARKET GARDEN WORKERS.

Demand Wages Award.

At a meeting of market gardeners' employees held at Cheltenham on May 8, a demand was made for the application of award rates of wages. It was pointed out to Messrs. Clarey, M.L.C., Field and Cremean that these workers were not covered by an award and that the Australian Workers' Union had agreed to support their claim.

When the claim was originally made, employers had not raised any opposition, but had claimed that any awards so made should apply to all Victoria, and not only to the Metropolitan areas. The recent conference of the Australian Labor Party endorsed the introduction of legislation to allow an award for all employees engaged in primary production.

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Certainly those business men who have many payments to make over a considerable area need cheque accounts, but even those, in common with all other men, will find the Savings Account a most useful and convenient aid to money accumulation.

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BEST PRICES, PROMPT ADVICE AND REGULAR SETTLEMENT.
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Leading Country Order Business
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Send Sample Consignment and
Arrange Prices for Season.

Brand—
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Good Fruit . . .

WELL GRADED AND WELL
PACKED ALWAYS FINDS A
READY SALE IN QUEENSLAND.

TASMANIA

Leading Australian Firm of Fresh Fruit Exporters.
Manufacturers IXL Jam and Canned Fruits.
Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth.
All Orchard Supplies available at all times.
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of Fast Vessels to the U.K. and Continent, having well equipped holds and machinery for the carriage of Refrigerated and Chilled Produce.

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Do not run any Financial Risk with your Fruit
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Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: Griffith Producers' Co-op. Co. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

Established 1911.

Market Notes & Prices

FRUIT PRICES IN THE SYDNEY MARKET.

Survey of Operations for the Period April 25 to May 25, 1938.

By L. T. Pearce, Market Representative Fruitgrowers' Federation of N.S.W.

THE SEASON under review is that period of the year in which the first breath of Winter appears to cause a reduction in demand for all fruits. In addition, it is the time when Apples and Pears with such tropical fruits as Bananas and Pineapples, comprise the chief stock of retailers, and a consequent dullness in demand becomes apparent. This year the 150th Anniversary Celebrations terminated with Easter and Anzac Day, and the sudden ending of the orgy of spending in which the public indulged, made the reaction in the markets more pronounced than usual.

Coincident with this seasonal reaction, certain changes took place in the Sydney market, which changes involved the establishment of a uniform opening hour for both fruit and vegetable sellers, business commencing at 7 a.m. instead of the vegetable market having the advantage of an hour earlier business. On May 2 also a section of agents who had been moved from place to place like the lost tribes of Israel, were again moved from the new vegetable grower-sellers' market and became located in No. 1 vegetable market. Some disturbance to business resulted, as was natural, and many envious eyes were cast at the temporary location of these men, who, it is probable, will require to be moved once more for the modernising of such section of the market into which they are to be permanently placed eventually.

The most outstanding characteristic of trade has been the earliness of the new season Oranges, colored Navel Oranges being available about three weeks earlier than is customary, and at the time of going to press, the natural reaction against unpalatable Oranges is occurring. Daily values were encouraging and almost any fruit with color, either natural or artificial, was forwarded heavily, with the result that at the present time retailers report that Oranges are not selling. The early Navels have been mostly of good size, Thompson's predominating from the M.I.A., while it is reported that metropolitan, and particularly coastal areas will have a large proportion of medium to small sized fruit, owing to dry weather experienced.

The Lemon position has been somewhat different from the average year, owing to the Winter crop fruit being rather small in size. Values had eased late in April, due to the Winter crop appearing, but the scarcity of fruit of the requisite count, degree of color and quality, resulted in fruit with those characteristics remaining at around 10/-, while small fruit and green fruit became almost unsaleable. This position has continued and growers have been advised to leave the small size fruit upon the tree in expectation of better demand than usual resulting for peel Lemons.

Imperial Mandarins are still popular as possessing greater sweetness than the Emperor, although the Emperor appearing have been large in size and of good quality. The first Emperor realised to 11/-, but latterly receded to 7/-, sales at present being slow. Grapefruit is also plentiful, small sizes predominating and being almost unsaleable, while counts 56, 64 and thereabouts have sold to the best type of buyer at from 7/- to 9/-. Supplies of this fruit have been

chiefly from coastal areas, inland fruit averaging around 5/- to 7/- per bushel.

The supply of Bananas increased with the return of better weather following the cyclonic conditions experienced during April. Values, however, have not been very high owing to cold weather conditions throughout the State repelling consumption.

Grapes have continued to arrive steadily. Black Muscat from the Orange-Molong district just finishing, while Purple Cornichon are in reduced supply, but have been realising a fairly consistent value of 6/- to 8/- half bushel. Some of the best Ohanez of the season have recently appeared, these coming from the M.I.A. and realising to 8/- half bushel. Melons also are still appearing, the varieties now being Casabas and Honeydews chiefly, most of these, however, are small and low values have been necessary to induce buyers to take sufficient quantities to clear stocks. Passionfruit have latterly appeared fairly plentiful and varying demand has been experienced for the choice quality fruit that has appeared. Most of this fruit is appearing from the Mangrove Mountains-Kulnura district and some good crops are reported from that area.

Tropical fruits have consistently arrived from Queensland, Custard Apples and Papaws increasing in quantity, while on occasions Pineapples have been very plentiful.

Victorian Tomatoes have practically ceased for the year, Western Australia and Queensland commencing to forward in their place. Queensland fruit is coming from both Bowen in the north, and from the vicinity of Brisbane, all consignments realising satisfactory values. There are indications that the M.I.A. crop will not be lasting very much longer and up to the present, arrivals from Mangrove Mountain-Kulnura district have not been very large.

Keen interest has been displayed by citrus growers in the prospects for the New Zealand market, and it is expected that the first shipments from the Murrumbidgee Irrigation Area will be despatched at an early date.

Exporters of Apples have practically concluded their season, values in most instances overseas being fairly satisfactory.

Prices.—Apples (Fancy and Good), per bushel: Cleo. (Tas. and N.S.W.), 4/- to 5/6; Del. (N.S.W.), 5/- to 14/-; Del. (Tas.), 4/6 to 7/6; French Crab (Tas.), 3/- to 5/-; Geeveston Fanny (Tas.), 3/- to 5/-; G.S. (Tas. to 7/-), N.S.W., 5/- to 9/-; Jon., N.S.W., 4/6 to 8/-; Jon. (Tas.), 4/- to 7/-; King David (N.S.W.), 3/- to 5/6; London Pippin (Tas. to 4/6), N.S.W., 2/6 to 6/-; Rome (N.S.W.), 4/- to 9/-; Scarlets (Tas.), 4/- to 5/6; Stayman Winesap (Tas. to 7/-), N.S.W., 6/- to 10/-; Tasma Pride (Tas.), 3/- to 5/-; Extra Fancy higher.

Pears (per bushel): Glou Morceau (Tas.), 6/- to 9/-; Giblin Seedling (Tas.), 5/- to 8/-; Jose. (N.S.W. and Tas.), 5/- to 10/-; P.T. (N.S.W., Vic. and Tas.), 9/- to 11/-; Winter Cole (N.S.W. and Tas.), 6/- to 12/-; Winter Nelis (Tas. and N.S.W.), 6/- to 10/-.

Bananas: N.S.W. and Qld.—Prices according to the Banana Marketing Board of N.S.W. Regulation graded, first quality fruit. Six, seven, eight and nine inch, 13/- to 19/- trop. case. Country order quality higher, fully ripe fruit lower.

Custard Apples: Qld.—2/- to 4/- few higher per half bushel.

Citrus Fruits: Grapefruit, N.S.W., Inland, 5/- to 7/- bush. Local, 3/- to 6/-, few 9/-. Lemons, N.S.W., Special and Standard. Local, counts 150 to 216, 4/- to 7/-, few 8/- bush; colored,

smaller, 2/6 to 5/- bush. Cured to 10/- bush. Plain grade, 2/6 to 5/- bush. Inland, 6/- to 10/- bush. Oranges, Navels, N.S.W., Local, 4/- to 6/-, special 7/-, Inland, 5/- to 7/- bush. Other Oranges, N.S.W., White Siletta, 2/- to 3/- bush. Mandarins, N.S.W., Imperial, 3/- to 6/- half bush; Emperor, 4/- to 7/- bush. Grapes, N.S.W.: Inland, Purple Cornichon 7/- to 8/-, Ohanez, 6/- to 8/- half bush.

Melons, N.S.W.: Inland, Cali. Cremes, Casabas and Honeydews 4/- to 7/-, few higher, trop. case.

Passionfruit, N.S.W., 3/- to 7/-, special 8/- to 10/-, few 12/- half bush.

Papaws, Qld., 8/- to 12/- trop. case.

Pineapples, Qld.: 7/- to 10/- trop. case.

Quinces, N.S.W. and Vic., 2/- to 5/- few higher per bush. (small unsaleable).

Tomatoes — N.S.W.: Green 3/- to 7/-, colored 7/- to 10/- half bushel. Qld., 4/- to 8/-, special 9/- half case. W.A., 6/- to 12/- per threequarter case. Repacked, 7/- to 10/- half bush.

QUEENSLAND.

Brisbane (23/5/38). — Messrs. W. Arkell & Sons advise prices as follows:—Apples: Jon., 6/- to 7/-, few 8/-; Del., 7/- to 8/-; G.S., 7/- to 8/-; Other Varieties, 4/- to 7/-. Pears: W.C., 10/- to 15/-; G.S., 8/- to 12/-. Oranges: 4/- to 7/-; Navels, 6/- to 8/-. Lemons: 6/- to 9/-. The "Ngatoro" is unloading to-day 22,000 cases, comprising 90 per cent. Apples. The "Duntroon" also, with about 3,000 cases and large quantities expected on Thursday. At the moment the prospects for this week are not bright for Apples, and only choice lines will sell.

Brisbane (20/5/38). — Messrs. Clark and Jesser report as follows:—For the past few weeks supplies of Apples have been very heavy, and as a big percentage of the fruit is of very large size and ripe, it has caused values to slump badly. Ruling prices at present are:—Jons., 2½ to 2½, 6/- to 7/-, large sizes 4/- to 5/-; Cleos, 6/- to 7/-; Scarlets, 5/- to 6/-; Del., 7/- to 8/-; Romes, 6/- to 7/-; Granny Smiths, 7/- to 8/-. Pears: Winter Coles, large 13/- to 14/-, small sizes

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9/- to 10/-; Winter Nelis and Jos., 11/- to 12/-; Beurre Bosc, 8/- to 9/-; Oranges: Common, 6/- to 7/-; Navels, 8/- to 9/-; Mandarins: Emperors, 6/- to 8/-; Scarlets, 7/- to 8/-; Lemons: 10/- to 12/-; Custard Apples: 2/6 to 3/-; Tomatoes: 6/- to 8/-; Bananas: 15/- to 17/- per case.

WESTERN AUSTRALIA.

Perth (27/5/38). — Apples: Jons., flats 4/- to 5/-, dumps 4/6 to 7/- (plain), 5/- to 10/6 (fancy), 7/6 to 11/6 (ex-fancy); Dunn's flats, 3/6 to 6/-; dumps 4/- to 5/-, 5/- to 6/6, 7/-; R. Beauty, flats 4/- to 5/-, dumps 4/- to 5/-, 5/- to 6/6, 7/- to 7/6; Yates, flats 5/6, dumps 4/- to 5/6, 5/6 to 8/6, 8/- to 9/6; G. Smith, flats 4/- to 6/-, dumps 5/- to 6/-, 6/- to 8/6, 8/- to 10/-; Cleo., flats 4/- to 5/-, dumps 4/- to 5/6, 5/- to 7/-, 7/6 to 8/-; Nickajacks, flats 4/6 to 6/-, dumps 5/- to 6/- (fancy); Del., dumps 6/- to 7/- (fancy), 8/- to 10/6 (ex. fancy); Rokewood, flats 4/6 to 6/-; Demo., dumps 5/- to 7/- (fancy). Citrus.—Oranges, Navel, flats 3/- to 7/6, dumps 5/- to 9/-; Lemons, flats 2/- to 7/-; Mandarins, flats 6/- to 14/-; Other lines: Pears, Keiffer, dumps, 7/- to 11/-; other varieties, dumps 5/- to 7/-; Tomatoes, flats, local, 2/- to 12/3; country 2/- to 8/-; Passionfruit, 1/2 flats, to 14/-.

SOUTH AUSTRALIA.

Adelaide (27/5/38).—Apples: Jons. and Cleos., 4/- case; Cleos. (large) 3/-; Londons 3/-; R. Beauties 3/-; do. (large) 2/6; Del. and G. Smith 5/-; Bananas (Qld.), 21/- to 23/- case; Lemons 6/-; Oranges (Mandarin) 6/- to 10/-; do. (navel) 6/- to 8/-; do. (Poorman) 6/-; Passionfruit, 20/-; Pears (eating) 7/- to 9/-; do. (cooking) 4/-; Pineapples, 16/-; Quinces 3/-.

VICTORIA.

Melbourne (26/6/38). — The following prices are quoted by the Victorian Wholesale Fruit Merchants' Assoc. — Per case: Apples, eating 4/- to 7/-, choice higher; cooking, 2/6 to 4/-, choice higher. Bananas, per double case, green, nominal, 20/- to 27/-. Custard Apples, 5/- to 8/-, choice higher. Grapes, 8/- to 12/-, few higher. Grapefruit, 6/- to 8/-, few higher. Lemons, 4/- to 11/-, few higher. Mandarins, 6/- to 11/-, few higher. Navel Oranges, 5/- to 9/-, few higher. Passionfruit, half case, 4/- to 7/-, choice higher. Pineapples, 8/- to 12/-. Pears 4/- to 8/-, few higher. Tomatoes, 5/- to 14/-, special higher.

The Melbourne market manager of the Federal Citrus Council of Australia reports sales as follow: — Navel Oranges, average standards, 75-84, 5/- to 5/6; 96-112, 6/-; 126-140, 6/6; 154-182, 7/-, a few higher; selected, 6/6 to 9/-, a few specially selected, wrapped, 7/- to 10/-. Lemons, average, standard counts, 140/275, 7/- to 8/-; 300-330, 6/- to 7/-; small, 4/- to 5/-; good standards, 7/- to 9/-; specially selected, 10/-, best counts, a few 11/-. Grapefruit. Marsh seedless, specially selected, wrapped, 35-53, 7/- to 8/-; 60-84, 8/- to 9/-, a few higher, 96-112, 7/- to 8/-, selected, 6/- to 8/-; average standards, slow, to 6/- and 7/-, best counts. Mandarins, Fewtrells, to 7/- and 8/-, best counts, Emperors, to 9/- and 10/-, a few higher. Thornys and Imperials, medium counts 13/- and 14/-. Commons: Nominally, 6/- and 7/- best counts.

NEW ZEALAND.

Messrs. Reilly's Central Produce Mart Ltd., Dunedin, report under date May 20, as follows:—During the week very heavy supplies of Apples have

been received, consignments from Nelson in particular have been the heaviest for many years. The fruit coming to hand is of excellent quality, and prices to growers must prove extremely disappointing. Pears have a good enquiry at slightly increased values.

Some nice quality hothouse Tomatoes are being received, and for these values have firmed.

A shipment of Island Oranges was received ex the "Wainui," these were in wasty condition, and had to be sold at very low values. A further shipment of Island Oranges is due on the 26th; this fruit should be of much better quality.

Small shipments of Queensland Pineapples are now arriving, condition and values being quite satisfactory.

There has been an increased demand for Bananas, and values are now firmer. A further shipment of Samoans ex the "Natua" is due on the 25th, and should meet with a good enquiry.

A shipment of Californian fruit came to hand during the week. Oranges are offering at low values. Grapefruit and Lemons have a good enquiry.

Prices (Per Case): Cal. Lemons 55/-, N.Z. Lemons 12/- to 14/-, Jamaican Oranges 30/-, Island Oranges 11/- to 19/6, Cal. 25/- to 30/-. Bananas, ripe, to 20/-. Apples: Jons., choice 4/- to 6/-, Del. 4/- to 6/6, Golden Del. 6/- to 7/-, Granny Smith 5/- to 6/6, Tasmans 4/- to 5/6, Sturmers 4/6 to 6/-, Cooking Apples 3/- to 5/-. Pears: Winter Cole 6/- to 7/6, Winter Nelis 6/- to 7/6, Beurre Clairgeau 5/-.

"Nice frock you're wearing."
"Yes. Do you like it? I had it for my twentieth birthday."
"Really! It's worn well."

NO BOUNTY AND NO EXCISE.

Commonwealth Government States its Policy.

Primary Industries Must be Organised.

There is no possibility of the Commonwealth Government acceding to the request of the Australian Agricultural Council to impose an excise levy and pay a bounty on primary products unless able economically to compete in the world markets. This statement was made on behalf of the Government during May.

Such a proposal would, it is claimed by the Government, be impracticable politically, as the legislation would never get through the House of Representatives.

In the consideration of all future bounties, such as those now paid on citrus fruits, Apples, and Pears and Plums, the Government will make it a condition that the industries must be properly organised.

Next to the levy and bounty proposal, State representatives at a meeting of the Council favored the licensing by a Minister or State Board of establishments such as dried fruit packing sheds and butter factories, and an extension of the existing State licensing powers by investing the competent authority with power to refuse or cancel licenses upon non-fulfilment of specified conditions.

Rests With States.

The Acting Minister for Commerce (Mr. Cameron) said that if the States reached unanimity on this proposal for orderly marketing, the Commonwealth probably would be prepared to pass any necessary complementary legislation. In any case, he added, it would be willing to explore the scheme. The initiative for future action rested with the States.

FRUIT PRICES IN LONDON.

The latest quotations from London give the following prices for Australian fruit:—

Apples: Steady. Tas., G. Smiths, 11/6 to 13/- a case; Jons., 7/- to 9/9; Coxes, 6/- to 10/3; Cleo., 8/- to 10/9; Worcesters, 7/- to 8/9; Coxes and Worcesters, 5/6 to 7/6; Vic., Granny, 10/3 to 13/9; Jons., 7/9 to 10/-; Cleos. 9/- to 10/6; South Aust., Jons., 8/- to 9/-; Cleos., 10/- to 10/9; N.S.W., Granny 10/- to 13/6; Cleos., 10/3 to 10/9.

Pears: Tas., Bosc., 9/3 to 11/9 a case; Packhams, 11/9 to 12/3; Comices, 8/- to 12/9; Vic., Bosc., 11/3 to 13/6; Jos., 11/6 to 14/6; Packhams, 11/3 to 14/6.

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The Pig Pen..

Pigs in Paddocks

FIRM, LEAN BACON.

Sties or Grazing.

A paper read by Messrs. L. & K. Bagshaw, of Saddleworth, at the S.A. Farmers' Conference recently, contains some good points upon the rearing of pigs to market stage. Part of the paper said:—

In this district, where dairying is carried on to some extent, pigs are a necessary and highly profitable sideline, but it is essential to breed and keep the right type. For modern requirements the baconer should not be too fat; the public will not eat fat, and this reduces the price per pound. Shoulders should be fine with plenty of depth of side for bacon, and with well-rounded hams right down to the hocks. Housewives, being the main purchasers, will not tolerate streaky bacon. This is caused by incorrect feeding, such as too much soft foods, e.g., scraps and slops. Good corn-fed pigs produce firm, lean bacon, which is so much in demand at the present time.

No pure bred in itself produces exactly the right type, and so it is essential to cross. In crossing, pure bred boars and sows true of their own particular type must be used, as they will produce an even type, whereas if boars and sows of an inferior type are used the progeny will be all shapes and sizes, and no straight lines of pigs will be obtained.

For the local trade in suckers and porkers the Tamworth boar and Berkshire sow cross is to be preferred. These produce a long, low, quick-maturing animal. This statement is borne out by the class of animal in demand at our local markets, and the price obtainable for this particular cross is well above any other.

For the baconer, a Large White boar should be used, as these produce a long-bodied pig with a wonderful side of lean bacon. The Large White cross is not suitable for porkers; they are much too leggy and do not fill out properly until the baconer stage is reached. Another important factor about the Large White is that when slaughtered the carcass is absolutely white and very attractive. This is an essential factor so far as the export market goes, but it is not so important for the local market.

It definitely does not pay to let suckers and porkers run out and graze. We have tried both grazing suckers and feeding them in sty's, and have proved that the latter is far more profitable and efficient. When a litter is grazing, the suckers run all their condition off, become leggy, and take far longer to reach a certain stage than the sty-fed pigs. By sty-fed pigs is meant pigs kept in a sty, say, 10 feet by 16 feet, cleaned out regularly, with batten or wood floor for sleeping quarters. These pigs were given exactly the same foods, and both lots were given milk regularly, and the sty-fed pigs were definitely superior to those that were grazing.

PASTURE FOR PIGS.

Provide Minerals and Vitamins.

Although young pigs will not grow rapidly if given only bulky foods, such as pasture, because of the limited capacity of their digestive tract, approximately one-third of their diet may consist of good pasture. In the case of dry sows, four-fifths of the diet may be provided as succulent pasture. Pasture, being relatively cheap fodder, should be used to the greatest economy capacity in pig feeding. Not

only does grazing provide pigs with cheap food, but it provides a measure of insurance against deficiencies of minerals and vitamins which are likely to occur when pigs are intensively housed.

Annual forage crops—Peas, Barley, Italian Ryegrass, Millet, Rape—have the advantage of yielding large quantities of green food in a short time; also the practice of ploughing and planting pig paddocks regularly is a satisfactory method of providing sanitation and control of parasites in the piggery. However, some permanent pasture is usually desirable, but it should be stocked lightly and given frequent rests to preserve the stand and prevent fouling of the paddock.

Wherever it can be grown Lucerne provides the best permanent pasture for pigs, but to prevent the pigs from rooting and spoiling the Lucerne plants the cartilage will need to be trimmed from the snout. When Lucerne cannot be used Kikuyu Grass is a satisfactory pasture. It has the advantage after establishment of being able to withstand severe grazing and rooting, and will quickly recover from drastic treatment by the pigs. It is palatable and nutritious, and will thrive under a wide range of conditions.—"Ballarat Courier."

CARE WITH YOUNG PIGS.

Authorities have stated that the pig's weakest point is its lungs, and the age at which a pig is most susceptible to various lung troubles is around the weaning age. This is particularly so if they have been weaned before eight weeks and have had to suffer the "change over" from sow's milk to foods which are often unsuited to the digestive organs of very young animals.

Defective accommodation is generally the cause of lung trouble. Care should be taken that cleanliness is maintained, and the run kept dry. Low-lying areas should not be devoted to pigs at all.

It is noticeable in warmer areas that the pigs prefer to sleep out in the open, which is an indication that the open air system has much to commend it, and that advantage should be taken of this open air preference when the housing is being planned.

Poultry Notes

SEASONAL TOPICS.

Some good practical advice was given at a meeting of poultry farmers in Melbourne recently by Mr. A. H. Woodsman, and the following excerpts are taken from the "Australasian Poultry World."

Chicken Pox: Just now chicken pox has to be guarded against, and, although one's own yards are clean, trouble may be imported from dirty yards of a neighbor. Conditions may be imported in a dozen ways that will spread the pox through the flocks, and may even develop into a roup outbreak. Mosquitoes and flies can be responsible. Ducks in adjacent yards, often at a fair distance, can be dangerous if allowed to become dirty, in fact, he dislikes ducks near the yards of any of his clients. A careless poultry farmer can often become a danger to his fellow producers some distance away.

When asked how many females should be run with males during the breeding season, the speaker replied that the number of females to males varies. He recalls one breeder who claimed successful fertility from one White Leghorn cockerel to 120 females, but this is asking too much. He prefers one male to 16 females. He has seen success from 2 to 28 for the full season, but his own observation satisfies him that the breeding pens should be watched and common sense and good judgment followed. It may be desirable to replace the male periodically with a rested bird.

Another questioner asked: What is the best treatment for sickness? Generally the axe, but in the case of chicken pox early treatment can save heavy losses. An old method is giving sulphur and Epsom salts in proportions of 1 cupful to the mash for 100 birds, alternated and given at weekly intervals. Some farmers make a good practice of giving these to their birds in the early Autumn.

FLOCK MATING OF POULTRY.

Not Conducive to Best Results.

On most farms it is found necessary to breed from "flock matings" to some extent, but this appears to be becoming the general practice for the pro-

duction of all chickens required, the main reason advanced being that there is less trouble in penning up flocks of breeders than is the case with single breeding pens.

It must be obvious, writes the Poultry Expert of the N.S.W. Department of Agriculture, that there cannot be the same uniformity in a flock as there is in a single pen, and in these times, when there are so many other factors operating to bring down the general quality and stamina of the flocks, it is more than ever necessary to concentrate on breeding from the very best stock. In order to do this, every farmer should endeavour to have at least a number of pens of single matings, i.e., one male to eight to ten females. The progeny from these pens should then be utilised to the fullest extent for breeding stock each year.

It is only by adopting this practice and exercising special care upon selection of the birds for the single breeding pens that improvements can be expected.

CULLING BY WEIGHT.

Most humans do not think for themselves. People who put a penny every week in an automatic scale and judge their health according to the rise or fall of their weight, or, worse still, read a chart on the scale giving a weight which a person of any certain height should carry, are foolishly following some statistics that purport to emanate from a study of the weight of, say, 1,000 average persons.

Obviously, one cannot go by this to determine one's health, or lack of it. Why should we want to be fat or thin or short or tall? The big thing is, are we normal and healthy?

All the same, weight is a good test for culling both pullets and hens. Every standard breed has an average body weight.

If pullets are anything from three-quarters of a pound below weight they should be culled, provided always that they are normally grown and fed. Birds that are overweight should be culled, too, especially amongst the adult hens. Those running to flesh are always bad producers.

But don't become a weight crank—use sound judgment always. Rarely do light or overweight birds turn out 100 per cent. profit makers.

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Correspondence is invited by the Association.

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STRAWBERRY CULTURE

Deterioration of Industry in Tasmania

During the past 10 to 15 years Strawberry plants in Tasmania have steadily become less prolific, owing to the spread of virus disease. Over a long period of years the Strawberries produced in the Island State were famed for their size, color, and freedom from disease, and the yields formerly obtained from the best growing areas were enormous. Unfortunately, many of the persons engaged in Strawberry production are not of that class who seek reason for the steady deterioration in the yields from the Strawberry patches, and the causes of an unusually light return are not probed into. Another factor that has contributed materially to the falling off in the vigor of the plants and their gradual decay has been the habit of growers failing or neglecting to secure a change of stocks. In some of the most prominent producing areas a grower would annually plant runners from his own plot over an extended period and never think of obtaining new stocks. The

result of this procedure was a steady deterioration in the vigor of the plants and a gradual decrease in the yield. As the plants steadily declined in vigor the ravages of the virus became more pronounced and small fruit growers who had been in the habit of obtaining a livelihood from a couple of acres of Strawberries ultimately discovered that the return from their plots were only at most a third of what at one time they were, and the fruit ceased to be sufficiently attractive for shop windows. The only outlet for such an inferior product became the jam factories. A variety of Strawberry that gave enormous yields 30 years ago was the Trollope, but this Strawberry is now never seen, and the Royal Sovereign, which took its place, and which, owing to size and color, was the delight of tourists, has practically passed away. The Ettesburg, which has shown stronger powers of resistance to the ravages of the virus, is far from being immune, and a steady de-

terioration is taking place both in quality and yield. At the present time there appears to be a danger of the culture of Strawberries being abandoned. Many growers who at one time produced large quantities of fruit are turning their attention to other products, and quite recently a deputation waited upon the Government and asked that some effort should be made to secure plants from the Mainland or elsewhere that could be profitably cultivated. The attitude of the growers is like that of the horse-owner who locked the stable door after the steed had vanished. Despite the urging of experts during the past ten years to watch their plots closely, and promptly remove and burn plants that appeared to be diseased, little or no action was taken. For the most part the advice and urging of the experts was ignored, and now that the industry appears to be threatened with extinction, an appeal is made to the Government to obtain supplies of plants immune from disease. As a matter of fact, the State Horticultural Department has not been inactive in the matter. When many of the growers showed little inclination or desire to assist in saving the plots and checking the spread of

virus, the Department obtained plants from the Mainland and England, and these are being propagated. There are not by any means sufficient of these to supply growers on a commercial basis, but it is quite possible that Government assistance will be provided to enable large supplies to be obtained from the Mainland. The results of 30 years ago proved that Tasmania was well adapted to the production of Strawberries, and the deterioration that has led almost to the extinction of a one-time prosperous industry is largely due to human inefficiency. It is not improbable that with Government assistance and under expert guidance and control, the production of Strawberries will again become a source of livelihood for a large number of poor families.

Cape Gooseberry

A Valuable Crop for Jams and Preserves.

The Physalis, or Cape Gooseberry, is known variously as Strawberry or Husk Tomato, Chinese Lantern Plant, and Ground Cherry. A native of South America, the plant thrives in most warm and temperate lands. It is grown for its fruit, which may be sold for fresh fruit or for jams and conserves.

The best soil is that which is light and rich. For early plants sow the seeds in August in a carefully prepared seedbox or hotbed in which there is a fair percentage of dry horse manure, or from the middle of September to the end of October in a sheltered bed in the open for the main crop. Under normal conditions it is not necessary to keep the seedlings shaded, but the ground must be kept moist. Approximately eight weeks from the sowing the rapidly growing seedlings should be ready to be transplanted. To harden the young seedlings off, gradually reduce the watering prior to removing them, but give a thorough soaking immediately before lifting them.

Transplant in a well cultivated field in rows 4 ft. by 4 ft. apart, watering them at the time of planting. Apply a topdressing of 1 part of sulphate of ammonia to 2 parts of superphosphate if the land requires topdressing. It will also be found advantageous to apply a small amount of sulphate of potash just before the fruit appears.

As the plants progress and make a few inches growth, pinch out the leaders and early shoots so as to encourage an early growth.

The chief troubles affecting the Cape Gooseberry are soft brown scale, which is controlled by spraying with white oil 1 in 56, and downy mildew, which is controlled by spraying with Bordeaux mixture 4:4:50.

Approximately three months after transplanting harvesting may commence, the season lasting two to two and a half months, although this period is regulated to a great degree by the season of the year. Although the plants will do quite well for two seasons if pruned back, annual planting is recommended.

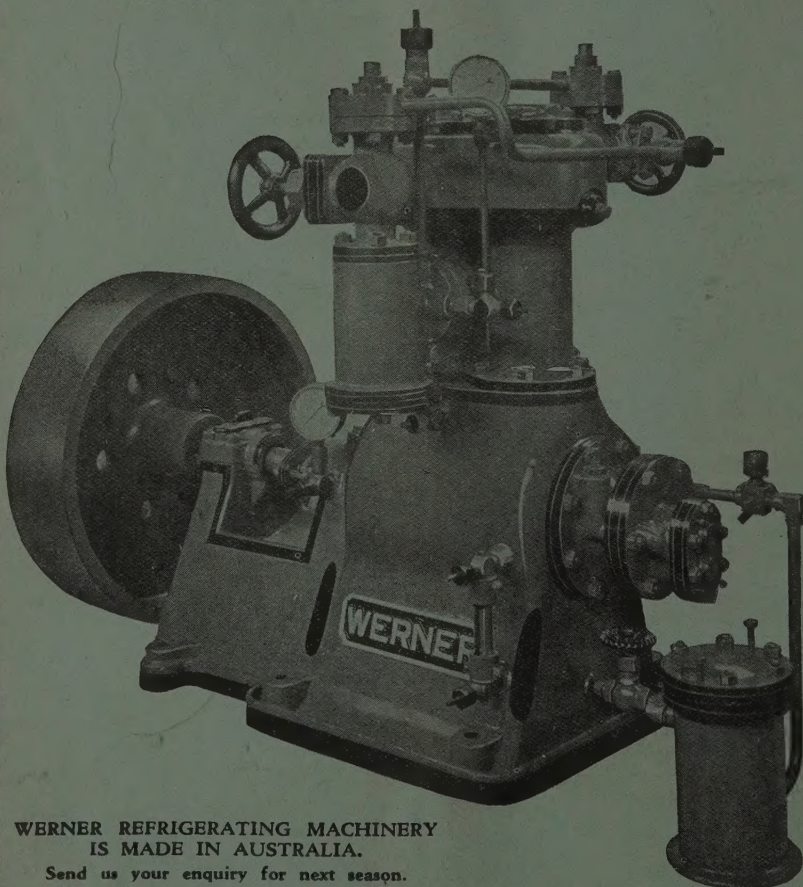
An American doctor has made careful tests regarding spray residue. He challenges the value of the .01 residue tolerance.

At the recent successful Field Day at Griffith, N.S.W., Sir David Rivett outlined the extensive activities of the C.S.I.R. Addresses were also given by Dr. Barnard and Mr. E. S. West.

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